DOCUMENT RESUME

ED 186 573 CE 021 469

AUTHOR	Harrington, Lois G.; And Others
TITLE	Competency-Based Staff Development: A Guide to the Implementation of Programs for Post-Secondary Occupational Personnel.
INSTITUTION	Ohio State Univ., Columbus. National Center for Research in Vocational Education.
SPONS AGENCY	Office of Education (DHEW), Washington, D.C.; Ohio State Dept. of Education, Columbus. Div. of Vocational Education.
PUB DATE	78
GRANT	G05-77-00149
NOTE	213p.; For a related document see ED 170 597.
EDRS PRICE	MF01/PC09 Plus Postage.
DESCRIPTORS	*Competency Based Teacher Education; Demonstration Programs; Guidelines; Postsecondary Education; Program Administration; Program Development; *Program Implementation; *Staff Development; *Vocational Education; Vocational Education Teachers

ABSTRACT

Divided into ten chapters, this document provides for implementing a competency-based staff development (CBSD) program for postsecondary occupational instructors. It also provides case examples of two exemplary CBSD postsecondary programs. Chapter 1 contains an introduction to CBSD programs. Chapter 2 discusses the competency identification process. The steps in conducting a needs assessment are presented in the third chapter. In chapter four information is presented concerning the development of professional growth plans. The fifth chapter examines the role of the resource person in CBSD programs, and chapter 6 examines the selection and development of CBSD materials and other resources. Alternative implementation procedures are presented in chapter 7. Procedures involved in managing a staff development program are presented in chapter 8, while chapter 9 provides information for planning the orientation of personnel. The final chapter examines the evaluation of the staff development program. The following information is appended: a review of the literature on personnel development needs of postsecondary vocational-technical teachers; an annotated bibliography of resources for CBSD programs; a master list of categories and performance elements; competency areas identified as relevant to postsecondary instructors; and a selected bibliography. (BM)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED186578

COMPETENCY-BASED STAFF DEVELOPMENT: A GUIDE TO THE IMPLEMENTATION OF PROGRAMS FOR POST-SECONDARY OCCUPATIONAL PERSONNEL

Lois G. Harrington

Audni Miller-Beach

Robert E. Norton

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1978

CE 021 469

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
NATIONAL INSTITUTE OF EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

The National Training Workshop to Improve Post-Secondary Vocational-Technical Personnel Development Programs was conducted by the National Center for Research in Vocational Education pursuant to an agreement (Project No. OH-V-708N, Grant No. GO5-77-00149) with the U.S. Office of Education under the provisions of EPDA Part F, Section 553, and The Ohio State University for Vocational Education.

The work reported herein was performed pursuant to a grant from the U.S. Office of Education, Department of Health, Education and Welfare. However, the opinions expressed herein do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

Foreword

During the sixties, the rapid expansion of post-secondary occupational education required administrators and instructors alike to focus their attention on procuring facilities and developing programs. However, in the seventies, with the "coming of age" of post-secondary occupational education, increasing attention has been directed to the need for effective staff development programs for both full-time and part-time occupational instructors. These instructors, most of whom come directly from business and industry, have unique skills as a result of their occupational experiences. However, many of these individuals are not prepared to teach these skills to others. Thus, the need exists for staff development programs through which occupational instructors can acquire a variety of teaching competencies.

Competency-based staff development (CBSD), with its focus on the acquisition of specific teaching skills, is an especially appropriate approach for post-secondary occupational instructors. CBSD offers a systematic and highly individualized strategy for the professional development of both part-time and fulltime instructors. Instructors identify the competencies they need to acquire and, with the guidance of a resource person, work toward attaining these competencies.

This guide is designed to provide direction and assistance for each phase of activity required in the implementation of a competency-based staff development program for post-secondary occupational instructors. It also provides case examples of two exemplary CBSD post-secondary programs.

Appreciation is extended to Lois Harrington and Audni Miller-Beach, Program Associates; and to Robert E. Norton, Senior Research Specialist, who are the principal authors of this guide. Appreciation is also extended to Orest Cap, Graduate Research Associate, for the Annotated Bibliography of Resources for Competency-Based Staff Development Programs, and to Janet Weiskott, Graduate Research Associate, for the chapter concerning evaluation of CBSD programs. Finally, credit is given to James B. Hamilton, Karen Quinn, and Glen Fardig, whose teacher education materials were reviewed, drawn upon, and found quite helpful in the development of this guide.

Robert E. Taylor
Executive Director
The National Center for Research
in Vocational Education

CONTENTS

Foreword iii

I. Introduction 1

II. Competency Identification. 13

III. Needs Assessment 25

IV. Development of Professional Growth Plans 31

V. Role of the Resource Person in CBSD Programs 35

VI. Selection/Development of CBSD Materials and Other Resources. 43

VII. Alternative Implementation Procedures. 49

VIII. Staff Development Program Management 63

IX. Orientation of Personnel 71

X. Evaluating the Staff Development Program 75

Appendices

Appendix A - A Review of Literature Concerning the Personnel Development Needs of Post-Secondary Vocational-Technical Teachers

Appendix B - An Annotated Bibliography of Resources for Competency-Based Staff Development Programs

Appendix C - Competency Areas Identified as Relevant to Post-Secondary Instructors Through DACUM Workshop

Master List of Categories and Performance Elements

Appendix D - Selected Bibliography

INTRODUCTION

A Perspective

The personnel who are involved in post-secondary occupational education are at work in a relatively new arena of the American educational system. The rapid expansion of occupational education at the post-secondary level received its initial thrust with the passage of the National Defense Education Act of 1958, an act which appropriated $15 million for the training of "highly skilled technicians" in occupations essential for the national defense. (Strong and Schaefer, p. 9) Succeeding legislative acts--including the Vocational Education Act of 1963 and the Vocational Education Amendments of 1968--provided additional financial resources for occupational education.

Between 1958 and 1968, occupational programs in post-secondary institutions increased rapidly--both in number and kind--in an effort to keep pace with the nation's growing demand for technological and skilled manpower. During this period, which has been termed the "Decade of Quantity" for the community college, community college enrollments increased by 271 percent. The number of these institutions increased by 61 percent, and the number of staff by 327 percent. (O'Banion, 1974, p. 24) The search for these staff members resulted in the employment of persons who came from a number of sources, including the public school system, business, industry, and four-year institutions. Many of these individuals--particularly

those hired as occupational teachers--had not been prepared specifically for a teaching career, and the majority of them had not been prepared to teach in the community college. While these conditions created a need for staff development programs, the immediate concerns were those of acquiring facilities and developing programs. But as the Sixties drew to a close, and stabilizing enrollments signaled an end to the decade of expansion, there came a growing realization that the success of the community college--the primary source of occupational education--could no longer be measured by the numbers of its facilities and programs. Instead, the institution's success rests with the quality of its programs and the professional competence of its staff. With regard to the importance of personnel development in the community college, O'Banion's statement has become a classic one: "The quality of education . . . depends primarily on the quality of the staff. . . The priority of the future is a priority on persons, on the needs of the people who staff the people's college." (1974, p. 25)

A Rationale For Staff Development

The current interest in the subject of staff development for occupational personnel can be attributed to the following major factors: (1) a recognition of the personnel development needs of occupational instructors, (2) a changing clientele, (3) declining faculty mobility, and (4) an increasing demand for accountability.

A Recognition of the Personnel Development Needs of Occupational Instructors

A particularly unique strength held by occupational teachers is that of their own experience in the occupation itself. These teachers, most of whom come directly from business and industry, "bring with them from their first career a wealth of experience and knowledge" (Van Ast, p. 6). However, the majority of these individuals have not been prepared to teach. As a result, a crucial need exists for staff development programs which provide instruction in a variety of basic teaching skills, such as (1) developing course outlines, (2) formulating behavioral objectives, (3) developing test items, (4) presenting class lectures, and (5) conducting group discussions. (Hammons and Wallace, 1976, pp. 15-17)

In addition to acquiring instructional skills, occupational teachers need to have an understanding of the history, philosophy, and goals of the community college and occupational education. In contrast to the traditional four-year institution, the community college is characterized by its service to a diversity of students via "open-door" admission, low-cost tuition, comprehensive programs, and its relationship to the community. All of these characteristics have significant implications for the role of an occupational teacher. (For further information concerning the personnel development needs of occupational instructors, see Appendix A containing A Review of Literature Concerning the Personnel Development Needs of Post-Secondary Vocational-Technical Teachers.)

A Changing Clientele

Community college instructors have always been called upon to respond to a wide variety of students. However, these teachers face a special challenge in meeting the needs of an increasing number of nontraditional students--among them, ethnic minorities, the physically handicapped, women, older students, part-time students, senior citizens, and the underemployed. In order to respond effectively to these students, teachers need to acquire new instructional competencies. (Hammons and Wallace, 1976, p. 1) They also need to internalize and reflect a sensitivity to the special needs of nontraditional students.

Declining Faculty Mobility

Since 1968, the growth of the community college has stabilized. In some institutions, the number of students and staff members has declined. (Wallace, 1975, p. 13) Consequently, community college instructors of the Seventies do not have the same degree of employment mobility which was theirs previously. In fact, the majority of staff members presently employed in community colleges were hired during the Sixties. Accordingly, a particular need prevails for these seasoned faculty members to be "retreaded, revitalized, upgraded, refreshed, updated, retaught" (Wallace, 1975, p. 16). All teachers--regardless of their level of experience--need opportunities to explore recent developments in education, including the design and implementation of nontraditional instruction, the use of new instructional facilities and equipment, and research regarding the effect of various instructional techniques.

It has been suggested that the current lack of faculty mobility results in staff members "looking to the institution where they are employed" in order to find the "enriching experiences they need in order to grow" (Gaff, 1975). Thus, community colleges are challenged to provide such experiences through staff development programs.

An Increasing Demand For Accountability

Like other educational institutions which are competing for public monies, community colleges are subject to the taxpayers' and legislators' demands for greater accountability. However, community college personnel are especially vulnerable to these demands since "their colleges have evolved as a result of public pressures for better education" (Nordh, 1971). In response to such pressure, the colleges must demonstrate a higher degree of effectiveness. (Smith, p. 130) As a result, instructors themselves are required to be increasingly effective in fulfilling their assigned responsibilities. Staff development programs, as a resource for professional growth, are seen as an important mechanism for increasing the institution's productivity.

An increased demand for accountability, a changing clientele, an awareness of the personnel development needs of occupational instructors, and declining faculty mobility--all of these factors have resulted in an increased recognition of the need for staff development programs. Consequently, community colleges have initiated a variety of approaches to staff development, including

orientation programs, short-term workshops, staff retreats, summer institutes, inhouse seminars, encounter groups, conventions and professional meetings, "packaged programs" such as programmed learning units, and apprenticeships. (O'Banion, pp. 107-112) While many of these approaches provide excellent opportunities for professional growth, there is yet a need in many colleges for a more systematic, individualized approach to staff development.

A frequent criticism of most present staff development programs is that such efforts are "sporadic and disorganized" and do not employ "a systematic strategy aimed at a significant end" (Rubin, p. 6). According to several authorities on staff development, it is tremendously important that the staff development program be viewed--by both coordinators and participants--as a "continuous process of facilitating change in the professional behaviors of all education personnel" (Norton, p. 2). In staff development programs for occupational teachers, the involvement of "all education personnel" is an especially critical concern with regard to part-time teachers. Although part-time instructors now comprise "the majority of all instructors" in community colleges (Lombardi, p. 11), they have customarily been neglected as far as staff development is concerned. (Schaefer, 1976).

Present staff development programs are also often criticized for their "irrelevance." In many cases, the lack of relevance is attributed to the program coordinator's disregard of the

instructors' individual needs. One author has stated that the topics of community college staff development programs are often selected according to "current issues or what is available" rather than according to the needs of staff. (O'Banion, p. 107) Another critic charges that "The staff development specialist, seemingly, presumes that all teachers are precisely the same in background, belief, knowledge, technical finesse, and teaching style. . .teacher complaints of meaninglessness and irrelevance have been ignored more than acknowledged" (Rubin, pp. 6-7). It appears that the extent to which the teachers' needs are acknowledged largely determines the extent to which the program succeeds. Hammons has observed that faculty development programs "will fail if their authors design them according to their own personal views of reality" (1976, p. 164).

In response to the apparent need for staff development programs which are both systematic and individualized, it becomes appropriate to consider the concept of competency-based staff development--a concept which offers a promising alternative for the improvement of personnel development programs for post-secondary occupational instructors.

Competency-Based Staff Development: An Alternative

CBSD Defined

Competency-based staff development (CBSD) employs the concepts and strategies of competency-based teacher education (CBTE), or performance-based teacher education (PBTE). CBTE

and PBTE for all practical purposes are synonymous. Both programs stress the development of competencies, and both endorse the same essential elements. Some educators, however, distinguish between the two terms. The word "competency" emphasizes the fact that learning in competency-based programs is structured around the identified and verified competencies needed by teachers. The term "competency-based teacher education" is, therefore, appropriate for any such teacher education program structured upon teacher competencies. In performance-based programs, the word "performance" is used to emphasize the fact that these programs require teachers to demonstrate their ability to perform the essential competencies in an actual school setting.

Like PBTE and CBTE, a competency-based staff development program is structured upon teacher competencies. CBSD provides teachers with a systematic program through which to improve their present teaching skills and acquire new ones. In a CBSD program, teachers are required to demonstrate essential teaching tasks in an actual teaching situation. Actual performance of the tasks ensures that the teacher has not only the technical knowledge required but also the ability to perform competencies (teaching skills or tasks) which are essential to successful teaching. This approach to staff development has particular significance for occupational instructors and their colleagues in the community college, many of whom have not had previous instruction in <u>teaching skills</u>. A competency-based staff development program also offers a unique opportunity for the

professional growth of those teachers who have been prepared through conventional teacher education programs. Traditional teacher education programs and state certification regulations have often focused on giving teachers the necessary number of courses with the proper course titles in order to meet graduation and certification requirements. In CBSD programs, however, the focus is on demonstrating specified competencies (knowledge, skills, and attitudes) essential to successful teaching.

Characteristics of CBSD Programs

CBSD programs, like CBTE and PBTE programs, are characterized by five essential elements:[1]

1. Competencies to be demonstrated by the teacher are carefully identified, verified, and made public in advance.
2. The criteria to be used in assessing achievement--and the conditions under which achievement will be assessed--are explicitly stated and made public in advance.
3. Assessment of competency takes the teacher's knowledge into account but depends upon actual performance as the primary source of evidence.
4. The instructional program provides for the individual development and evaluation of each of the competencies specified.

---

[1]Adapted from American Association of Colleges of Teacher Education, Achieving the Potential of PBTE: Recommendations. PBTE Series: No. 16 (Washington, D. C.: American Association of Colleges for Teacher Education, 1974), pp. 32-33.

5. Teachers progress through the instructional program at their own rate by demonstrating the attainment of specified competencies.

In addition to these essential elements, there are several additional desirable characteristics which are associated with CBSD programs:

1. Instruction is highly individualized and personalized.
2. Learning experiences are guided by immediate feedback.
3. The program as a whole is systemic.
4. Emphasis is on exit, not on entrance, requirements.
5. Instruction is often modularized, featuring materials with both required and optional learning activities in order to accommodate various learning styles.
6. Instruction is individually paced rather than time based.
7. Instruction is "field-centered" to a considerable extent.

In addition to the above elements and characteristics, a key feature of a competency-based staff development program is the use of a resource person. The role of the resource person is essentially that of a manager of learning who is trained to work individually or as a team member in guiding the teacher through his or her educational program. Potential resource persons in CBSD programs include the staff development coordinators, university teacher educators, occupational program supervisors, and master teachers.

Advantages of CBSD Programs

As a staff development approach characterized by personalized training, independent learning, and a time-free structure, competency-based staff development programs offer the following advantages for occupational instructors:

1. The teacher's professional development program is individualized and personalized. Success in the program is based on demonstrated proficiency, not formal course work.
2. The teacher's program of training is based largely on the teacher's expressed and observed needs, rather than on a prescribed program of studies.
3. With the help and guidance of the resource person, the teacher develops a set of competency goals and determines priorities for their achievement.
4. A resource person is regularly available to observe the teacher at work, confer about learning activities and problems, and critique the teacher's performance.
5. While there are no formal courses, small group and seminar sessions are arranged to help teachers work on their common professional development problems and discover possible courses of action.
6. Teachers proceed at their own rate to complete the learning activities and achieve proficiency in specific competencies.

7. The teacher uses his or her own student groups to practice the teaching skill and to demonstrate final proficiency.
8. A qualified resource person (from within the school system or from a university program) assesses the teacher's performance of the competency in the actual school situation.
9. University credit, professional improvement points, and professional certification are based on achievement of competencies rather than on completion of formal course work.

Conclusion

It is apparent that a number of advantages can be accrued through the implementation of CBSD programs for post-secondary occupational instructors. The remaining chapters of this guide concern the key steps involved in implementing a CBSD program: competency identification, needs assessment, development of professional growth plans, the role of the resource person, selection and development of CBSD materials, alternative implementation procedures, program management, orientation of personnel, and evaluation.

II. COMPETENCY IDENTIFICATION

The term "competency" has been defined in several ways. Generally, "competency" refers to the achievement of the knowledge, skills, and attitudes required to perform a given task. (Norton and Huang, 1975) However, in the context of identifying competencies for inclusion in a CBSD program, "competency" is used to designate the skill, or performance elements which form the basis of the staff development program. While the competency statements may emphasize skill, it should be remembered that the performance of any competency requires an acquisition of the prerequisite knowledge and attitudes.

The purposes of the competency identification process are to (1) create a framework for program design, (2) establish the foundation of an individualized program for professional growth, and (3) provide a basis for the selection and development of program materials. Because a true CBSD program is structured entirely around competencies identified and/or verified as important, the identification process merits considerable time and much careful attention. Unless the right (really important) competencies are selected as the basis for the staff development program, the program stands little chance of being successful. The competencies identified (or selected) must not only be the really important ones but must also be perceived as the important ones by the teachers, administrators, and others concerned with the staff development program.

To gain the needed acceptance and support, it is extremely important that the individuals who identify the competencies are able to adequately reflect the needs and concerns of faculty members and the institution for whom the program is designed. For this reason, it is recommended that the competencies be identified by an advisory/steering committee comprised of the staff development coordinator, occupational department chairpersons, master teachers (both part-time and full-time) from each occupational area, occupational teacher educators, and appropriate administrators (e.g. the Dean of Occupational Education).

Approaches to Competency Identification

A number of approaches may be employed to identify the most appropriate teacher competencies. These procedures include task or role analysis, course conversion, school learner needs assessment, and the theoretical approach.

Task or Role Analysis

The task analysis approach typically involves identifying the competencies involved in teaching in a given area or at a given level by (1) conducting a search of the literature; (2) asking teachers working in that area and/or at a given level to describe what they do, what they feel they should do, and what additional skills they feel they need; and (3) asking teacher educators, supervisors, and administrators to describe and verify what teachers do and/or should be doing. Criticism of this approach stems from the fact that this procedure may perpetuate

the status quo since it tends to emphasize competencies which represent what teachers do, and not necessarily what teachers do or should do that, in fact, promotes student learning.

While at first glance this may appear to be a serious limitation of the task analysis approach, the same problem unfortunately pervades all the approaches to competency identification because we lack solid evidence about how a teacher's performance affects student learning.

One of the best examples of the task analysis approach to competency identification was provided by Cotrell and others (1972) in their identification of 384 performance elements (competencies) considered important to successful vocational teachers. These competencies provided the research base for the Center's 100 performance-based teacher education modules.

Another innovative approach to task analysis that has recently gained considerable attention and some use at The Center and other institutions is the DACUM (Developing A Curriculum) approach. DACUM was created in the late 1960's by the Experimental Projects Branch, Canada Department of Regional Economic Expansion, and the General Learning Corporation of New York. The implementation of the DACUM process requires a committee of persons who are "expert in the occupation" (Adams, p. 4).

It is important to note that the success of the DACUM approach depends to a great extent upon the selection of committee members and the leadership skills of the DACUM coordinator who acts as a catalyst for the contributions of the committee members.

He/she must focus on "the quality and accuracy of definitions and avoid influencing the stated needs of the occupational experts" (Adams, p. 5). In order to avoid possible bias and to function objectively, the coordinator should be a person who does not have any direct stake in the outcome of the task analysis.

Through the use of small group brainstorming techniques, the committee (1) defines the general areas of competence required in the occupation (e.g. post-secondary occupational instructor), (2) identifies the specific skills for each competency area, (3) reviews and refines the skill statements, and (4) places the statements in sequential order. The end result of the DACUM process is a competency profile chart which provides a basis for curriculum development. DACUM has proved to be an effective approach for quickly deriving, at relatively low cost, the competencies or tasks that must be performed by persons in a given occupational area.

One of the best examples of the DACUM approach as it is used to identify the competencies needed by post-secondary instructors is provided by the work of Holland College, a two-year institution on Prince Edward Island, Canada. They have used DACUM twice to establish a "Learning Management" instructors competency profile chart which lists the skills required of teachers in their competency-based instructional program.

As part of a national training program for improving post-secondary personnel development programs, the Advisory/Planning Committee for the project served as a DACUM workshop group in

September 1977 to identify over 40 broad competency "areas" which they felt deserved priority attention. While these competency areas were not verified in any way, they may be of some value to staff development planners. See Appendix C for a copy of these priority areas. (Additional information regarding DACUM can be found in Adams' DACUM Approach to Curriculum, Learning, and Evaluation in Occupational Training. Second Edition. Yarmouth, Nova Scotia: Nova Scotia New Start Inc., 1975).

Course Conversion

The course conversion procedure results in the translation or reformulation of present teacher education courses or inservice programs into new statements of behavioral objectives or competencies. The knowledge and skills a teacher should possess are inferred from the current course or inservice program content. This approach, even more than the task analytic procedure, is inclined to reinforce the status quo. Consequently, such an approach is not likely to result in many significant program changes.

The School Learner Needs Assessment

The school learner needs assessment procedure appears to be a very desirable approach, however, it remains the most difficult and least viable at this time. While the goal among teacher educators has been to train teachers in the skills which will result in student achievement, to date there has been no research which conclusively links particular teacher behaviors to student

achievement. Nonetheless, efforts have been made to identify competencies according to the needs of school learners. For example, in Minnesota, the Task Force to Study Programs Leading to Certification for Teachers of Social Studies (1973) started with the identification of "pupil outcomes toward which a competent teacher makes progress." From there, they generated a list of "teacher behaviors which facilitate achievement of pupil outcomes." The final product was a list of "competencies which facilitate those teacher behaviors."

Theoretical Approach

The most difficult approach to competency identification, as well as the most costly, is the theoretical approach. This method requires not only extensive study and research, but also a high degree of technical skill and conceptual expertise. Theories and models of learning and human behavior are complex and abstract and require a great deal of interpretation and extrapolation. A further limitation is that theoretically derived programs can only be successful if the underlying theories used are, in fact, accurate descriptions of the realities of the teaching process.

The Use of Competency Lists

Each of the procedures described above require a significant degree of effort and expertise. Even after the competencies have been initially identified, the list of competencies should be verified. The verification process requires that the competencies

be (1) compared to other lists, (2) given to large numbers of appropriately selected educators and rated with regard to the importance of each item, and (3) the data analyzed to determine the importance and ranking of each competency. These research procedures present a rather complex undertaking for most teacher education departments and community colleges. Consequently, the most practical--and expedient--approach to competency identification is likely to be found in the use of competency lists already verified through empirical research. For example, Cotrell's list is comprised of 384 teacher competencies or performance elements. (For Cotrell's list, see Appendix C). Other lists which are appropriate for use by post-secondary occupational institutions include Dodl's The Florida Catalog of Teacher Competencies published by the Panhandle Area Cooperative, Chipley, Florida, and the "Learning Management" teacher competency profile which was developed by Holland College as the basis for their competency-based staff development program. This chart contains 251 skills, 164 of which are designated as "priority skills." (A copy of this profile is provided in Chapter VIII.)

Considerations

The effectiveness of any staff development effort depends to a great extent on its degree of relevance for the participants. Thus the content and approach of a CBSD program should be tailored

specifically to the needs of individual teachers. In this regard, the information acquired through a faculty needs assessment is an essential resource in the competency identification process. (Further information concerning needs assessment is contained in Chapter III).

A number of teachers--especially those employed directly from business and industry--will need to acquire such "survival level" competencies as developing a lesson plan and developing instructional materials. Teachers who have already received instruction in such pedagogical skills need to work toward attaining more advanced competencies, such as evaluating the instructional program, conducting a student follow-up study, or maintaining an advisory committee. In some states, new or experienced instructors need to satisfy certification or university requirements. These requirements should certainly be given serious consideration during the competency identification process. In several states, including Nebraska, Iowa, and Washington, post-secondary occupational teachers can satisfy state certification requirements through competency-based preservice and/or inservice programs. Such programs specify the required and/or elective competencies which must be acquired.

In determining the competencies for a CBSD program, it is necessary to consider not only the level of the competencies, but also the types of competencies--professional (pedagogical), technical (occupational), and general. A comprehensive CBSD program may be concerned with all three of these areas or primarily with one or two of them.

In most CBSD programs, the emphasis will probably be directed toward the professional competencies that instructors need in order to effectively "teach" what they know to their students. The professional competencies may be of several types. For the new and inexperienced teachers, they will probably be the so called basic "survival skills" needed by any teacher to be successful in the classroom and laboratory. For other more experienced teachers, the professional competencies will probably include the more advanced competencies needed for certification purposes and for proficiency in teaching. Even the most experienced professional can usually find ways to improve his/her instructional skills.

Most of the professional competencies addressed will have knowledge, skill, and affective components. While the emphasis in competency-based or performance-based staff development programs may appear to be on "demonstrated ability to perform," such emphasis should not be construed to mean that the psychomotor (skill) and cognitive (knowledge) domains of learning are unimportant. Nothing could be farther from the truth. Unless the teacher knows what and how he/she is to perform, and performs with appropriate feeling and understanding of his/her students, he/she cannot perform successfully in an actual teaching situation.

Currently, a critical need exists for the inclusion of competencies which emphasize the affective component. Instructors who are faced with an increasing number of nontraditional students need to acquire new sensitivities. For example, these teachers

need to develop an understanding of the particular needs of women who are enrolled in nontraditional occupational programs, as well as an appreciation of the needs of multicultural students, older students, and the like. In most cases, all post-secondary staff will need to acquire these competencies.

There is also need for occupational teachers to keep up to date in their technical knowledge and skills. While most occupational instructors are hired from business and industry in the first place because of their technical expertise, these skills can soon become outdated. Thus, provisions should be made for teachers to keep abreast of technological changes in their occupational area through advisory committees, summer employment, business-industry exchanges, or other means. In some cases, the staff development coordinator will play an important role in helping teachers arrange for updating their technical competencies, while in other post-secondary institutions this may be left entirely up to the teachers themselves.

Finally, the general education competencies need to be given consideration. Many institutions make the assumption that persons hired to teach already have these competencies to a sufficient degree. Others, however, take the view that if employees did not acquire these competencies prior to their employment or have only minimal competency in social, oral, written, or other general education skills, the institution should offer as much training as possible in these important competencies.

It should be apparent that priorities will have to be established. The priority competencies for part-time staff may also differ from those for full-time staff. The advisory/steering committee should advise the staff development personnel on these matters.

III. NEEDS ASSESSMENT

As educators, we espouse the criticality of addressing the individual needs, interests, and abilities of our students. Yet we often do not apply these same principles to the education of our teachers. This is particularly crucial when dealing with instructors at the post-secondary level. While one can assume that a newly hired secondary English teacher has received minimal preservice training in the pedagogical skills, the background of post-secondary instructors is a mixed bag. Some have only had experience teaching in universities or in secondary schools. Some come from industry with no pedagogical skills at all. Others have previous experience teaching at the post-secondary level, but lack formal training. In addition, the career goals of these instructors vary markedly. Some truly wish to work full-time over time as post-secondary personnel. However, many have other full-time careers and only wish to work part-time as instructors. And, unfortunately, due to the current shortage of university teaching positions, some persons have taken post-secondary jobs only because the university positions they really desired were not available.

The key question is how, given these varied backgrounds, goals, and interests, do we produce instructors capable of delivering the quality education needed by post-secondary students in an open entry/open exit institution. According to Hammons (Doty and Gepner, 1976, p. 165), "Unlike children

who tend to be subject centered or content-oriented in their learning tasks, the adult has a tendency to be problem-oriented when learning. This means an adult learns better those skills and that knowledge, or is receptive to value or attitude changes, that are relevant to problems faced at that moment." How does one determine those needs most relevant to the staff? This is not an overwhelming task if you draw on the ample work which has already been done in this area. Holland College has identified a post-secondary Instructor Profile including 164 skills. Hammons (1973, pp. 49-60) lists nine broad areas of skill needed by community college faculty, including:

- philosophy of postsecondary occupational education
- writing of measurable learning objectives and criterion test items
- development of course syllabus
- methods of teaching lecture, laboratory, and small and large group instruction
- constructing self-paced learning units
- utilization of audiovisual aids
- knowledge of student profile and special needs of student body
- how to effectively work with the community through advisory committees in their program area
- college policies and how to handle emergency situations
- development of interpersonal skills

Cotrell, et al (1972) identified and verified 384 performance elements which were considered important to both secondary and post-secondary vocational teachers. These 384 performance

elements were clustered into 100 competency areas and ten broad categories by The Center for Vocational Education in the process of developing and field testing modules that can be used to help teachers acquire those competencies.

Most writers in the literature covering the area seem to agree that the unique characteristics of post-secondary institutions and the diverse needs of the minority and nontraditional post-secondary students are key areas. While community colleges used to serve a college preparatory function with a student body in the 18 - 25 year old range, they are now more occupationally oriented, serving a student body in the 18 - 65 year old range, many who are nontraditional students, with a variety of needs. Post-secondary instructors need to have the tools to deal with a widely heterogeneous student body.

Although it is now a fairly straightforward task to use the literature to identify the skills needed by post-secondary instructors in general, it is important to prioritize those skills in terms of local needs. Each post-secondary institution needs to consider its philosophy, the nature of its community setting, and the characteristics of its student body when selecting and prioritizing the needed skills.

The next step is to <u>assess each instructor's current skill level</u> in each of the areas identified. This can be accomplished using a variety of sources, including:

- self-assessment
- supervisor assessment of performance
- student assessment

These assessments can be done by criterion-referenced instruments, or questionnaires--many of which already exist in the literature.

Although assessments by others (supervisors, students) are helpful in achieving an objective assessment of performance, because of the voluntary nature of most personnel development programs, it is most important to obtain input from those for whom the programs are to be designed. Questionnaires developed for this purpose exist in abundance, and most involve more than simply asking the instructor whether or not he/she possesses the identified skills. For example, a needs assessment questionnaire developed for administrators by the Arizona State Collegial Team requires the respondent to rate each skill in four areas: (1) What level of skill does your job require? (2) What level of skill do you possess? (3) What level of training do you desire? and (4) What type of training do you desire? Again, in the Mesa School District, a needs assessment instrument designed by Vicino (Scott-Blair, pp. 33-35) to determine the needs of administrators requires the respondent to rate each skill both in terms of experience (expertise in, worked with, knowledge of, no knowledge of) and interest (desire further training, desire training, do not desire training). A device designed specifically for the post-secondary level is given in Hammons and Wallace (1976, pp. 103-116), and is entitled the Community College Staff Development Needs Assessment Survey. The Professional Development Handbook for Community College Part-Time Faculty Members developed in Illinois (1977) also

includes specifications for developing needs assessment devices. As with the other instruments cited, this handbook stresses the need to gather data on areas other than the level of skill possessed by the instructors. This handbook suggests that one needs information concerning the following areas: (1) background information and demographic characteristics of the faculty, (2) information on how the faculty presently keeps up to date in the field, (3) data on what the faculty considers to be incentives for participation in personnel development activities, and (4) data on what the faculty considers to be obstacles to participation. Examples of a needs assessment questionnaire designed to elicit this information are included in the document.

The Minnesota Research and Development Center for Vocational Education conducted a study to construct a set of instruments to evaluate the teaching performance of post-secondary vocational teachers. A number of tested forms resulting from this study are available from the developers, Erwin K. Geigle et al. (1977), including:

1. Professional Needs Assessment instruments
   - teacher self-assessment form
   - supervisor form
   - student form
2. Evaluation of Instruction instruments
   - teacher self-rating form
   - supervisor form
   - student form
3. Background Information form

These forms, designed to help teachers develop a personalized plan for professional self-development, include skills which are easily keyed to the modules developed by The Center.

Finally, a CBVE administrator module developed by The Center entitled Appraise the Personnel Development Needs of Vocational Teachers, (Norton et al., 1977) includes a rather thorough discussion of needs assessment techniques as well as a number of samples of needs assessment devices.

Once you have determined what the needs of the institution are, where the staff is, where you want them to be, where they want to be, and how they want (or don't want) to get there, you can begin to plan and design the necessary programs. Needs assessment is simply a process of determining the difference between what exists and what is needed or desired. The tools for identifying this gap exist in quantity in the literature. Your task should be to utilize these tools to adapt and design a system for your institution which meets its unique needs and the characteristics of its students.

IV. DEVELOPMENT OF PROFESSIONAL GROWTH PLANS

Given a specific CBSD program, it is assumed that the competencies offered in that program have been identified according to the needs of the faculty members within the institution. However, to ensure that the program is virtually tailor-made for the individual, it is necessary for each teacher, in consultation with the resource person, to formulate his/her personal plan for professional growth. The plan itself is a primary source of information for the resource person as he/she works with the teacher to determine the content of the teacher's program. In addition, the plan also serves as a documentation of the teacher's commitment to the program and as an official device for recording the teacher's progress toward attainment of specific competencies. It is extremely important that the content of the plan be held in confidence by the resource person, the staff development coordinator, and the teacher. Never should the plan be used as a basis for determining salary increments, promotions, and the like.

Assessment of Competency Needs

In order to identify specific "competency needs," the teacher should examine the list of competencies which have been identified by the institution. Through a review of these competencies, the teacher can begin to assess which competencies need to be improved and which need to be attained. The teacher should also examine the responsibilities outlined in his/her

job description and determine the competencies required for the performance of these responsibilities. While both the institution's competency list and the job description serve as viable references in the needs assessment process, it is recommended that the teacher consult with his/her department chairperson, the staff development coordinator, and master teachers to identify performance areas in which increased expertise is needed. Frequently, student evaluations supply the kind of feedback which is useful in assessing one's strengths and weaknesses. In some instances, state certification requirements may provide a framework for identifying competencies which need to be acquired. It is also important that the teacher consider those competency areas which have been designated as priorities by the institution. For example, the advisory/steering committee may place special emphasis on competencies related to the use of nontraditional instructional techniques. Whatever the emphasis, it is the responsibility of the staff development coordinator and the resource person to see that institutional priorities are taken into account.

Format of Plan

The format for an individual's professional growth plan can be a simple and straightforward one. The form should include (1) the selected competencies, (2) target date for attaining each competency, (3) actual date of attainment, (4) procedures for competency attainment, including a description of the

instructional materials to be used, and (5) signatures of the teacher and resource person. A sample form is provided on the following page.

Another type of record-keeping device used in CBSD programs is that of the competency profile chart which is included in Chapter VIII "Staff Development Program Management." This particular chart represents the competencies contained in The Center's 100 PBTE modules. The spaces within each rectangle can be used to record the target date for competency attainment and the date of actual attainment. These spaces can also be colored in to designate the competencies which are to be pursued as well as those which have been achieved.

PROFESSIONAL DEVELOPMENT PLAN

Name _____ Phone:

Office _____

Address _____

Home _____

_____

Instructional Area _____ No. Years Teaching _____

SPECIFIC COMPETENCIES TO BE DEVELOPED: List here the competencies to be developed based on needs assessment and/or personnel interest.

Competencies Needed	Expected Completion Date	Actual Completion Date

PROCEDURES FOR COMPETENCY ATTAINMENT: List or describe here the modules or other materials or procedures to be used to achieve the identified competencies.

_____ _____ _____ _____

Signature of Resource Person | Date | Signature of Teacher | Date

Competency Development Plan Completed _____ _____

Date | Signature of Resource Person

V. ROLE OF THE RESOURCE PERSON IN CBSD PROGRAMS

Critics of programs which use performance-based teacher education (PBTE) modules claim that turning post-secondary instructors over to packaged materials to work independently is impersonal and ineffective. Normally, one does not start a chapter with such negative statements, but this point is critical: the staff development coordinator must not abandon teachers to the modules. Individualized instruction does not mean isolated instruction. The Center's modules absolutely require the active presence of the resource person to make them work. He or she is vital in (1) orienting instructors to the CBSD program, (2) helping instructors select the modules they will take, (3) assisting instructors in getting needed supplies and materials, (4) arranging small-group and large-group meetings so instructors have a chance to interact, (5) helping instructors set up simulations involving peers, (6) providing advice when instructors encounter problems, (7) supplementing the material in a given module with materials, presentations, and activities drawn from his/her own expertise, (8) providing instructors with feedback when it is needed, and (9) evaluating instructors' final performance.

When testing The Center's modules, if teachers indicated they disliked working with modules, it was generally because they had been asked to work alone on the modules unassisted by a resource person or by fellow teachers. Typical comments included:

"I couldn't find any peers to work with"

"My resource person was never available"

"I couldn't locate the required videotape"

"I'd already had a course on this topic so this was sheer busywork for me"

"I miss discussing things with my peers"

Teaching is an interactive process. You cannot teach instructors to interact effectively with students if you give them a module and require them to work in isolation. These modules were not designed for that purpose. Each module provides basic information and activities, but the resource persons are the key to making the modules work. The modules are only one tool in the teacher preparation process. It is up to the resource person to provide additional learning tools and to truly individualize the instructional process to meet instructors' needs.

Explaining CBSD to Instructors

In all probability, few of the instructors will be familiar with CBSD, so the resource person's first task is to introduce them to the concept. People tend to be uncomfortable (even antagonistic) when confronted with something unfamiliar. Before they will accept the new, they want to know what it is, what its value is, and how it will affect them. Consider how you feel when someone asks you to taste something unfamiliar and, perhaps, vaguely suspicious in appearance. To avoid such a qualmish reaction the resource person needs to tell the instructors why he/she has elected to use modules, how using modules requiring

actual performance can help prepare them to teach, and how your particular program of use is set up.

Another consideration is that instructors have probably been exposed primarily to educational systems involving large-group instruction and teacher-centered instruction. They are used to having the instructor take responsibility for teaching, rather than their having to take responsibility for learning. Therefore, they need to be oriented to the new role they are expected to play and to their new responsibilities for learning.

Helping Instructors Select Modules

In CBSD, teachers are evaluated on whether they have achieved a particular skill, not whether they have completed a particular module. Thus, another of the resource person's tasks is to help instructors identify which modules, or which learning experiences within a module, they need to complete to meet your requirements and their needs. This means that the resource person will have to identify which modules will be used in the staff development program, which (if any) are required, and which are optional. The resource person will also have to meet individually with instructors to determine which skills they already possess. If an instructor already possesses a particular skill, he or she should need only to demonstrate the competency to specified standards without going through the whole module or to present other acceptable evidence of competency.

Facilitating Instructors' Completion of Modules

Most modules include activities (generally optional) which call for outside resources. A teacher may be asked to present a lesson to a group of peers. The module may suggest supplementary readings. It may be recommended that the teacher videotape his/her performance for self-evaluation purposes. A module may recommend that the material in the information sheet be discussed further with peers or with the resource person. A teacher may be told that it would be helpful to meet with an experienced instructor to discuss a particular concept or to observe that instructor demonstrating a particular skill.

Instructors may experience difficulties in carrying out these activities if guidelines or procedures have not been set up in advance. A system needs to be devised for instructors to easily locate the equipment, materials, peers, and resource persons they need so that they can complete the module without being forced to jump unnecessary hurdles, or experience unnecessary delays. This system should also include provision for periodic small-group and large-group discussion sessions.

Another part of the system must be designed to ensure that an instructor with a problem or question concerning an activity has access to the resource person, or another person designated as a resource, within a reasonable amount of time. Specific office hours, periodic meetings, sign-up sheets, alternate resource persons can all be used to prevent instructors from being unable to get a needed answer.

It should be noted that to provide instructors with advice and answers concerning a given module, it is absolutely critical that any resource person be totally familiar with the content and learning activities in the module involved.

Supplementing Module Activities

Modules were written to be used by persons involved in staff development, not to replace them! Staff development coordinators usually have been specially trained in the professional and/or technical skills needed by instructors. Their expertise and experience are essential to successful use of the modules. Most staff development coordinators are aware of numerous materials and techniques which are effective in teaching a particular skill, such as:

- presentations
- guest speakers
- textbooks, periodicals, pamphlets, handouts
- simulations, role-playing situations
- videotapes
- audiovisuals

As mentioned previously, the resource person must be thoroughly familiar with each module that he or she assigns. During the process of familiarizing himself/herself with a particular module, the resource person should plan how he/she can supplement the contents of the module. Does he/she have an excellent handout on the subject? Would instructors benefit from participating in a seminar at some point in the module? Would a

large-group presentation enhance the module activities at some point? Does he/she have additional tips or practical do's and don'ts that need to be conveyed to instructors concerning the skill? Is there additional information, unique to the occupational area in which the instructors are teaching, which they need to be aware of? By asking questions of this type as he/she reviews each module, the resource person can make the learning experience more effective for the instructors.

Providing Feedback

Because there are limitations on each resource person's time, where possible, The Center's modules have teachers do Self-Checks on their progress, involving the resource person as the evaluator only in the final experience. However, the modules remind teachers periodically to check with their resource person if they are experiencing problems. If an instructor does not agree with or understand the feedback provided in the module, the resource person needs to provide him or her with additional feedback. Furthermore, as time allows, the resource person should spot check instructor progress to be sure that each instructor is using the modules correctly and to provide instructors with reinforcement and feedback concerning their progress. For example, some instructors, not used to setting their own pace, may tend to wait until the last minute to complete their module work which seems less pressing. By monitoring their progress, you can detect such problems and take corrective measures.

Evaluating Final Performance

The Center's modules require that teachers prove their competency by meeting specified criteria while performing the skill in an actual school situation. It is essential that, when instructors are evaluated using the Teacher Performance Assessment Form in the final experience, the evaluator be qualified to use this form effectively. This means that resource persons should be familiar with these forms in advance to increase the consistency of the ratings, and that other persons who are asked to use these forms (e.g., experienced instructors, department heads) be trained to use them properly. Since the instructor's competency is assessed during the final experience of each module, it is essential that these forms be used appropriately, objectively, and consistently.

The role of the resource person is indeed a crucial one, requiring, perhaps, a change in emphasis and activity on the part of the staff development coordinator, but certainly not a change in the need to draw upon all of his or her reservoir of information, experience, and training. Modules are not a substitute for the staff development coordinator, but simply a way to structure, individualize, and enrich instructor learning.

The duties of the resource person are many, varied, and in some ways, demanding. The resource person works with instructors as advisor, helper, and evaluator. If the resource person can accomplish these duties conscientiously and skillfully, the resulting staff development program can provide an exciting and

growth-producing experience for the instructor, and a professionally satisfying experience for the staff development coordinator.

VI. SELECTION/DEVELOPMENT OF CBSD MATERIALS AND OTHER RESOURCES

Given the unique characteristics and goals of each post-secondary institution, it would be ideal to develop for each institution the exact materials needed by its staff. However, this is not realistic in most cases. Material development and field testing is a time-consuming and costly task. If your competency-based program is to be individualized, the materials you use must be sufficiently self-explanatory and well developed to allow instructors to work unassisted to a certain degree. Furthermore, to truly reflect the skills and point of view of instructors, they need to be developed with input from experienced instructors. Most institutions do not have the staff time and financial resources necessary to accomplish such a massive curriculum development task.

The size of this task should not be underestimated. Using criteria considered to be essential to an effective package, staff at The Center have evaluated innumerable CBI and PBTE packages and have found few that met even minimal criteria. Most are little more than curriculum outlines--lists of suggested activities and references. This is not a criticism of the abilities of the developers. Given the time and resources allotted to these persons, the materials developed are of reasonable length and quality--but they are not effective staff development materials if the program is to be individualized.

If your institution has a full-time curriculum development person, or staff development person with curriculum development

responsibilities, and if instructional staff can be given released time to assist in curricular development, then you can consider developing your own materials locally. In this case, you should strongly consider starting your efforts using the extensive experience of others. A number of module development models exist, and most of these models conscientiously practice what they preach. For example Heath (m.d.) at Oregon State University and Houston et al. (1972) have developed modules on writing modules. Kapfer and Ovard (1971) have developed an instructional learning package (ILP) on preparing and using ILP's and Hyder (1971) has developed a learning activity package (LAP) on constructing LAP's.

Drumheller (1971), Frantz (1974), Hauenstein (1973), and Silvius and Bohn (1975) have contributed to the area by producing documents explaining systems approaches to curriculum development. Arendo, Hasla, and Weber (1973) have produced the second edition of their CBTE module development handbook.

Others such as Fardig (1975) have produced handbooks or guides for the development of modules for secondary and post-secondary technical subject matter instruction. Additionally, The Center has produced a Module Development Handbook.

If, however, you do not have the necessary staff to develop your materials from scratch, you have access to numerous existing materials. It then becomes a matter of locating those which meet the needs identified by your institution and instructional staff, and evaluating their effectiveness using some sort of evaluation device. One source of materials is the Florida

Catalog of Competency-Based Teacher Training Materials, Second Edition. Another source is the 100 PBTE modules produced by The Center. Additional instructional materials are described in the Annotated Bibliography of Resources for Competency-Based Staff Development Programs in Appendix B.

The evaluation device that you use to assess any materials you consider should include the following types of items:

1. Does the module contain the following basic components:
   a. clear directions for using the module?
   b. a rationale or introduction explaining the importance of the skill being covered?
   c. a listing of performance objectives?
   d. clear, complete explanations of the activities to be completed in order to reach each objective?
   e. information sheets or reference to a minimal number of outside references containing the needed information?
   f. devices for immediate feedback?
   g. a criterion-referenced post-assessment form designed to measure actual performance?
2. Does the module also contain the following components (optional):
   a. a listing of prerequisites?
   b. a listing of terminology, and any resources and materials required?
   c. a pre-assessment device?
3. Does the module either include all necessary materials or clearly specify what is needed?
4. Does the module contain a variety of activities?
5. Are opportunities for recycling activities included?

6. Does the module provide opportunities for instructors to interact with peers, experienced instructors, and others?
7. Are supplementary enrichment activities provided to meet the needs of interested instructors?
8. Although the module could be enhanced by group activities, could an instructor handle it on an independent basis?
9. Do the module format and activities allow for flexibility and thus can they meet the needs of instructors with different learning styles?
10. Are the module activities sequenced in a logical order?
11. Is the module well-produced (e.g., good grammar, correct spelling, clear layout, clean copy, neat corrections, etc.)?
12. Is the module attractive?
13. Are the materials reasonably priced?
14. Are supportive training materials available?
15. Do the modules include a reasonable amount of audiovisuals?

One advantage of adopting or adapting materials which have already been developed is that you can then use whatever developmental time you have available to develop materials, especially audiovisual, to supplement the written materials. Locally developed materials, such as videotapes using experienced instructors in your own institution or additional situation-specific modules, can greatly increase the utility of the modules in your own institution, more effectively meeting the unique needs of your faculty.

Use of Community Resources

In the process of securing materials and resources for your CBSD program, you will need to draw upon those resources which are available from business and industry. On the basis of their practical knowledge and experience, business and industry personnel are able to make highly relevant contributions as resource persons in staff development efforts. For example, by engaging business and industry representatives as speakers for staff development programs, you can provide opportunities for teachers to learn of the most recent developments in their subject matter areas, specifically with regard to new technology, specialized occupational operations, and employment trends. Given the responsibility of preparing students for work in a specific occupation, it is essential that occupational instructors are thoroughly knowledgeable of current developments within that occupation.

In order to identify qualified persons, you will need to contact a variety of sources within the community, including large corporations and smaller business establishments, the Chamber of Commerce, labor unions, and professional, technical, and trade organizations. These same contacts will be of value if you decide to arrange site visits as part of your staff development program. Such field experiences afford teachers a firsthand view of the latest equipment and technology which is currently in use. It is often worthwhile to follow the site visit with a staff development seminar so that teachers can discuss their impressions and observations.

In addition to serving as speakers and facilitating site visits, resource persons from business and industry can (1) assist in arranging personnel exchange programs, (2) provide access to additional business and industry personnel, (3) help develop curricula which is relevant to current technology, (4) furnish instructional materials (e.g. sample kits of raw materials, finished products, exhibits) for staff development, and (5) conduct faculty seminars.

You may choose to incorporate personnel exchange programs into your staff development program in order to give instructors an opportunity to update their technical skills and actually experience the current work setting. These programs can give the instructor a valid basis for curriculum revision.

Regardless of the specific approach you take toward the use of community resources, it is important to remember that the effective use of these resources requires careful planning and preparation. In many cases, establishing contacts with local business and industry personnel is a long-term project. However, in view of the benefits to be derived from such contacts, it is a project which is worth your effort.

VII. ALTERNATIVE IMPLEMENTATION PROCEDURES

The literature cites a wide variety of activities and devices which can be used to provide post-secondary instructors with needed pedagogical skills, including:

- inservice activities at the institution: guest speakers, seminars, practicums, workshops, institutes, research projects, use of modules, pairing an inexperienced teacher with an experienced teacher, orientation sessions, encounter groups, etc.
- outside activities: workshops, seminars, professional organization conventions, staff exchanges, visitations to other institutions, staff retreats, etc.
- university course work: such work can be required for certification, or encouraged by reimbursements, fee waivers, state grants, sabbaticals, etc.
- internships

Three basic models for implementing competency-based staff development programs which incorporate these activities and devices are possible, but it is important to remember that one need not select a single model. It is entirely possible, and often preferable, to combine approaches or offer a number of options if the needs of faculty are to be met. A program that is geared to meet the needs of new instructors requiring survival skills may not meet the needs of seasoned instructors desiring advanced skills. A program designed to be convenient to the time constraints of a full-time instructor may not be convenient for part-time faculty.

The first model is the university-based model. In this model, the university has almost complete control of the program and its design, and activities take place primarily on the

university campus in the form of courses. If the university has a competency-based teacher education program designed specifically for the post-secondary level, this can be a beneficial option. However, inherent in most such programs are a number of shortcomings. These programs require the instructor to complete the training program during his/her "free" time--evenings, weekends, etc. For the full-time instructor, this means he/she must carry a full teaching load--which more often than not does not include adequate time for planning and other such necessary instructional tasks which occur outside the classroom--and then attend classes and complete course work on top of those other duties. Furthermore, the instructor must often travel great distances to attend these classes. It is even more difficult to justify requiring part-time instructors to complete such courses since part-timers frequently already have a full-time job in addition to their part-time teaching duties. In addition, since part-time faculty are often paid by the hour, they are often reluctant, and understandably so, to use their free time on behalf of the school.

Another serious problem with such programs is that, more often than not, they are not sufficiently responsive to the needs of the post-secondary institutions for which they are training personnel. Typically, the programs are designed without any input from the post-secondary institutions in the area. They are, thus, more theoretical than practical. Even more critical, they tend to be designed based on the views and expertise of

the university faculty rather than on hard data from needs assessments conducted with the clientele to be served.

Finally, an instructor, especially a new instructor, is looking for practical help in dealing with the very real problems he/she faces daily in the institution, the classroom, and the laboratory. Even if the university lectures in theory are really "very good for the instructors," the instructor who are looking for help may not appreciate this "fact"--thus killing motivation.

The second model is the institution-based model. In this model, the institution has total control of the program. Such programs can be very responsive to local needs--a plus--however, again there can be limitations. A single post-secondary institution may not have adequate personnel to conduct such programs. The breadth of expertise and quantity of faculty available at a university or college of education are not usually within the post-secondary budget.

Another consideration is certification. Completion of a university-based program usually results in automatic certification. However, it is unusual for a post-secondary institution on its own to provide a program for its instructors sufficiently complete that the state would certify those completing the program.

Despite these limitations, some post-secondary institutions, without or with only limited access to university programs, have successfully developed and implemented institution-based programs. One such institution is Holland College, a post-secondary

institution located on Prince Edward Island, Canada. In a joint effort between Holland College, Canada Manpower and Immigration, P.E.I. Civil Service Commission, and Department of Vocational and Continuing Education of P.E.I., an individualized, competency-based staff development program of in-service education for training and upgrading instructors was established at Holland College. In 1971, a DACUM committee composed of members of the faculty and administration developed an "instructor profile chart" of the competencies needed by their instructors. This committee identified 251 skills in 11 areas of competence; 164 of these skills were considered to be a basic requirement for a beginning instructor.

DACUM is an approach to task analysis and curriculum development whereby a committee of workers from the occupation being analyzed participate in a modified brainstorming type of workshop to (1) identify the major areas of responsibility of workers in the occupation, and then (2) further specify or delineate the tasks that workers must perform in each major area.

Holland College then developed a program and a module structure to deliver on the identified skills. When they began to develop their resource materials, they discovered the 100 modules developed by The Center. Since there was considerable overlap between the skills they had identified and those covered by The Center materials, Holland College decided to use many of The Center's modules in their program.

In Holland College's staff development program, 14 instructors--selected based on their experience in a given area and their ability to interact with peers, and representative of all programs (agriculture, business and office, health occupations, technical education, trade and industrial, and leadership institute)--served as resource persons. Each of the 50 faculty members were then asked to select ten modules each based on individual needs and to spend one-half day per week working on these modules. A staff development resource center was also established to support the program. This center houses a large assortment of printed materials, as well as a staff development specialist to assist instructors as they pursue module activities. Staff progress was recorded using the instructor profile chart. On this chart, an instructor's skill in a given area is rated according to a seven-point scale as follows:

0 - Has some knowledge and limited experience, but not sufficient for participation in a work environment.

1 - Can perform some parts of the skill satisfactorily, but requires instruction and supervision to perform entire skill.

2 - Can perform this skill satisfactorily, but requires periodic supervision and/or assistance.

3 - Can perform this skill satisfactorily without assistance and/or supervision.

4a - Can perform this skill without supervision or assistance with proficiency in speed and quality.

4b - Can perform this skill without supervision with initiative and adaptability to special problem situations

4c - Can perform this skill without supervision or assistance and can lead others in performing it.

Staff development is a continuous process, and an instructor can increase or upgrade his/her skills at any time.

As of November 1977, the Holland College program was thriving in two locations, had served 250 teachers, and 100 - 150 persons were using the resource center throughout the year. The instructor profile had been revised to 251 skills, with individualized learning packages prepared for each of these skills. Printed and audiovisual resources had been developed or obtained to supplement each package. The supporting facilities now included an audiovisual area, a quiet study area, and a group discussion area in addition to the resource room. An instructor completing the 164 skills specified on an instructor training profile receives a provincial teaching license. And, the question of university recognition of the program was being discussed.

The third model is the combination approach involving a collaborative effort between university and post-secondary institution. This approach eliminates most of problems inherent in the other two models. The needs of the post-secondary staff and institution are the basis for the program, activities are scheduled at a time and in a place convenient to the staff, the expertise and resources of the university as well as those of the post-secondary institution are available. Instructors completing the program can receive certification through university channels.

Such programs involving collaborative efforts between the university and the post-secondary institution can take a variety of forms:

- The program can be designed by (1) university faculty with input from post-secondary staff, (2) post-secondary staff with input from university faculty, or (3) university faculty and post-secondary staff working in cooperation.
- The program can be conducted at (1) the university, (2) the post-secondary institution, or (3) a combination of both sites.
- The program can be conducted by (1) university faculty with the assistance of post-secondary staff, (2) post-secondary staff with the assistance of university faculty, and (3) university faculty and post-secondary staff working cooperatively.

Three examples of collaborative staff development efforts are in operation in Iowa, Nebraska, and Georgia.

Through the Department of Industrial Education at Iowa State University in Ames, a program (Van Ast, 1977) has been designed to provide inservice education which will train staff developers to design and implement personnel development systems at their own respective institutions. The training is offered through five 2-day institutes covering (1) orientation to the total concept of personnel development systems (PDS), (2) methods of planning a PDS, (3) planning of PDS for participants' individual institutions, (4) evaluation of PDS efforts to date, (5) information concerning available personnel development and curriculum materials, including the 100 modules produced by The Center. Iowa State University has also been working closely with the community college personnel development effort by

offering off-campus workshops specifically designed to meet the needs of new teachers. These workshops focus on the 33 required preservice competencies that have been established by the state board for the temporary approval certificate. Additional information concerning the design and content of these training programs is available from John Van Ast at Iowa State and from the State Department of Education.

In Nebraska, a recent project involved a collaborative effort in staff development between three Nebraska university teacher education departments and Nebraska's post-secondary community colleges. Initiated in response to concerns of the post-secondary institutions that present professional vocational teacher preparation courses being offered were not responsive to the needs of their instructors, the "Professional Preparation for Two Year Post-Secondary Vocational Teachers" project was designed to identify those competencies needed by post-secondary instructors. They also developed a statewide system for delivering on these skills which would involve all institutions of higher education concerned with the professional preparation of post-secondary vocational and technical teachers.

Two lists of competencies were identified: (1) 28 competencies recommended for preservice training sessions for prospective teachers, and (2) additional competencies (62) considered to be "vital to proficiency in teaching." These two sets of competencies closely parallel the competencies upon which The Center's modules are based. Forms for outlining a prospective

teacher's program of study and for recording his or her progress were also developed and agreed upon by the post-secondary institutions and institutions of higher education.

A unique feature of the procedures established is that two basic options are available to each prospective or inservice teacher who participates. One option is the traditional nine semester credit hours of professional vocational education course work. The second, new and alternative option is the competency-based option whereby beginning post-secondary teachers need to demonstrate mastery of at least 50% of the first set of 28 competencies as the initial step in meeting certification requirements. Any teacher then satisfactorily mastering an additional 35% of the second set of 62 competencies would be fully approved for vocational teaching.

Responsibility for conducting this program is also shared. Faculty at the University of Nebraska - Lincoln and at least two vocational teacher educators from each of the other Nebraska institutions have been trained as resource persons. A staff member has been added to the Lincoln staff with specific responsibility for implementing the program. And, the Dean of Instruction, or another staff development person has been trained to be Supervisor on Site at each of the post-secondary institutions.

In the State of Washington, a collaborative effort for the training and certification of occupational education instructors in 27 community colleges has been approved by the Vocational Director's Council, Washington Community College System effective

May 27, 1977. The State Board for Community College has contracted with Central Washington State University to develop and conduct a resource person training program for staff development coordinators from the community colleges. A competency-based program involving the completion of 21 modules (12 required and 9 additional from a list of 25 electives) has been approved as an alternative to the 90 clock hours of three courses for initial certification. The 12 required modules include:

- organize an occupational advisory committee
- conduct an occupational analysis
- develop student performance objectives
- plan a unit of instruction
- develop a lesson plan
- select student instructional materials
- prepare teacher-made instructional materials
- introduce a lesson
- summarize a lesson
- employ oral questioning techniques
- demonstrate a manipulative skill
- assess student performance: skills

For more information about this program, contact Owen Shadle, Coordinator, Inservice Education, Department of Technology and Industrial Education, at Central Washington State College.

In Georgia, a collaborative program of training for new vocational teachers which is designed to serve both secondary and post-secondary level personnel has been developed and is

being tested. Four universities with teacher education programs (University of Georgia - Athens, Georgia State University - Atlanta, Georgia Southern College - Statesboro, and Valdosta State College) are involved. The state has been divided into four geographic areas, each university serving one area. A regional teacher trainer, with a master's degree in vocational education and at least two years of teaching experience, is located at each university. These trainers are responsible for working full-time with the teachers-in-training in their districts, with experienced teachers who need help making a transition from group-based to individualized instruction, and with all other vocational teachers desiring additional skills.

The program for new teachers is organized into two basic phases. Phase I is "Intensive Instruction in Survival Skills." Within five days after the new, uncertified teacher is hired, the regional teacher trainer starts the new teacher on an intensive two week program--conducted at the instructor's school, at the teacher education institution, or at some other convenient location--designed to provide the new teacher with skills in the following areas:

- basic responsibilities of a vocational teacher
- developing an instructional plan
- organizing the learning environment
- evaluating students
- identifying, adapting, and organizing instructional materials
- managing an instructional setting

- implementing an individualized instructional program
- teaching the disadvantaged/handicapped learner.

Phase II is an internship program involving individualized work by the new teacher for six months to a year in his/her own institution. A minimum of ten hours of on-site assistance is provided to the teacher by the regional teacher trainer. The materials used by the teachers are self-paced, performance-based instructional materials, covering the following areas:

- organizing curriculum materials
- improving instructional techniques
- organizing the shop/lab
- utilizing community resources
- developing a learning resource center
- utilizing instructional media
- evaluating and improving program
- developing and adapting instructional units
- utilizing prescriptive learning techniques
- eliminating sex bias
- utilizing student motivational techniques
- serving disadvantaged/handicapped students
- developing cooperative projects with other courses of instruction

A teacher who is judged by the regional teacher trainer as having reached the required level of proficiency in phases I and II receives five quarter hours of college credit and a certificate.

Summary

While it is obvious that different approaches to CBSD exist and are being used, it should also be obvious that, in most cases, the collaborative approach involving close cooperation between a university and a post-secondary institution offers more advantages and fewer limitations than the other two approaches described. The best approach for any given post-secondary institution or university can be determined only after giving careful scrutiny to the options available and weighing the advantages associated with each.

VIII. STAFF DEVELOPMENT PROGRAM MANAGEMENT

According to Hammons and Wallace (Doty and Gepner, 1976, p. 138) 13 management questions and issues need to be considered prior to initiating a personnel development program, including:

- What answer can be given to staff who ask, "Why do we need a staff development program?"
- Who will be responsible for doing the planning?
- How will specific staff development needs be identified?
- What is the balance between institutional priorities and individual needs?
- Which staff should participate?
- How flexible will the program be?
- How can staff be motivated to participate?
- How should the program be scheduled?
- Who will conduct the program?
- What instructional technique(s) work(s) best?
- What publicity should be made of the program and how should the program be disseminated?
- Should the program be evaluated, and if so, how?
- How should the program be funded and what other kinds of support, besides funding, are needed?

Making a decision to utilize a competency-based modular approach to staff development will automatically structure your responses to some of these questions. Answers to other questions are provided elsewhere in this document, but, at this point let us consider answers to management questions in five areas: scheduling; staffing/coordination; steering/planning committee; record keeping; and facilities.

Scheduling

If your competency-based staff development program is individualized, instructors will, of course, be working on their own much of the time. However, instructors also need to have access to a resource person and to group activities, and this requires careful scheduling. Full-time instructors with full schedules and part-time instructors with other responsibilities each have unique time constraints which need to be accommodated if the program is to be successful.

In terms of assuring access to a resource person, a variety of resource persons should be designated for each skill. A university-based resource person, a staff development coordinator, other administrative staff, and experienced teachers are all potential resource persons. The times at which each of these resource persons are available should be posted in a location accessible to all participating instructors, and care should be taken to ensure that these available times are distributed over the day such that the needs of both part-time and full-time instructors are met.

In terms of scheduling small- and large-group activities, the unique features of each institution make it difficult to provide a universal answer to this question. Suffice it to say that participating in such activities is critical to the success of individualized programs. The Center's modules include many such activities because it was discovered that most people found working in isolation to be demoralizing. In addition, since

teaching is an interactive process, experience in interaction is surely a key to becoming an effective teacher. Thus, it is important to ensure that, despite the many inhibitors present, instructors who so desire have a chance to meet, to interact, to share problems and solutions, and to practice skills in a role-playing situation.

Staffing/Coordination

As mentioned previously, a diversified staffing pattern utilizing a wide variety of resource persons is ideal, but what about the responsibility for managing the total program. The literature seems to be in agreement that the program's success depends on having this responsibility clearly designated. When a single individual located at the institution, with or without staff, has full-time responsibility for staff development with visible support from the administration, the program has a much greater chance of success. The further away you get from this staffing pattern, the less likelihood there is of success. A university-based director is geographically separate from the program and frequently has other responsibilities. A current administrator assigned this responsibility is being asked to provide staff development on top of what is probably already a full schedule of activities. A committee of faculty members or an instructor with released time provided is still devoting only partial time and effort to managing staff development. This is not to say that programs using such management patterns are doomed to failure, only that they are less than ideal.

Effective, continual staff development requires the full-time commitment of the institution as reflected in full-time program management.

Another staffing consideration involves the use of consultants in the staff development program. Certainly, guest speakers and consultants can often be quite effective. However, more often than not the staff development budget does not provide for hiring such persons and it is important to be aware that their presence is not critical to the success of the program. Even if the budget should allow, it is often preferable to pay qualified institution-based personnel to perform these extra duties. Such personnel have a clearer view of the skills needed by staff at that particular institution, and rewarding these personnel for their expertise can motivate other personnel to increase and upgrade their skills.

Steering/Planning Committee

If the staff development program is to be truly effective, it must be responsive to the needs of the community served by the institution, and to the needs of the faculty. Thus, it is essential that representatives of these groups be involved in the planning and implementation of the staff development program. Such committees--composed of persons from industries for which the institution offers training, experienced faculty members, teachers-in-training, university teacher educators; post-secondary administrators--can be asked to provide input concerning many aspects of the staff development program. They can be involved

in the planning stages, help establish the competencies to be addressed, monitor program progress, assess program materials, and assist in evaluating program effectiveness. In addition, their ongoing involvement and support can increase the likelihood that the program will gain faculty, and perhaps financial, support.

Record Keeping

There are some highly desirable characteristics of CBSD record keeping that should be incorporated even in a simple and basic system, including (Fardig, Norton, and Hamilton, 1977, p. 62):

- The system must store a record of the instructor's entire proposed program.
- The system must provide an accurate record of the professional teaching competencies the instructor has mastered.
- The system must align competencies completed and credits awarded.
- The system must record dates of competency attainment to serve as progress checks.
- Instructors must have access to their own records to determine status.
- Resource persons need easy access to records in order to advise instructors, plan their own work schedules, and analyze program results.
- Official records must be tamper-proof.
- It must be possible for resource persons to record entries quickly and conveniently at any time during the program.

Staff development programs using The Center's modules can use any or all of the record-keeping devices developed to support use of The Center's materials. One key device is the criterion-referenced Teacher Performance Assessment Form, the final device in each Center module. Once this form has been used to evaluate

an instructor's skill in a given competency, a copy of the completed form can be kept in the instructor's file to document his/her performance.

The instructor training profile developed by Holland College and the Vocational Teacher Competency Profile developed by The Center (see following pages) are effective, yet simple, devices for monitoring instructor progress through the program. Such a device can serve several functions equally well. One can use this device to help instructors evaluate their present skills and identify those skills they wish to pursue. One can record on this device which skills have been attained and the level of proficiency attained. And, one can use this device as a transcript for providing other employers with information regarding the instructor's extent and level of competency. In addition, such a device, used properly, can encourage instructors to upgrade and increase their skills. (Additional information on more sophisticated record-keeping systems can be found in The Center's Guide to the Implementation of Performance-Based Teacher Education by Fardig, Norton, and Hamilton).

Facilities

Certain facilities are needed to support a staff development program, yet this need not be an insurmountable problem. Space is needed to house the modular materials and supportive resources. Space is needed for instructors to use the supporting audiovisual materials. Space should be provided for instructors to work individually and quietly, and to work in small discussion groups.

And ideally, a videotaping studio/classroom should be provided to allow instructors to videotape their performance for self-evaluation purposes.

Yet, the experience of Holland College proves that such facilities need not involve great expense. Using an existing old facility, similar to those public schools attended by Americans in the fifties, classrooms were converted to resource centers, and hallways were equipped with carrels where instructors could work individually on printed or audiovisual materials.

It goes back to institutional commitment. For the program to work, instructors must be convinced that the administration is committed to facilitating their staff development activities. The needed facilities do not have to be sophisticated; they need to be practical. If an instructor needs to view a slide/tape and does not have access to the tape, or the equipment, or space for viewing the tape, motivation quickly declines. Ensuring easy access to materials, equipment, and designated space can go a long way to encouraging active and effective staff development. (Again, additional information on facilities for PBTE programs is available in The Center's implementation guide.)

LEARNING MANAGEMENT

Name _____

C	CAN PERFORM THIS SKILL WITHOUT SUPERVISION OR ASSISTANCE AND CAN LEAD OTHERS IN PERFORMING IT
4	CAN PERFORM THIS SKILL WITHOUT SUPERVISION OR ASSISTANCE WITH INITIATIVE AND ADAPTABILITY TO SPECIAL PROBLEM SITUATIONS
A	CAN PERFORM THIS SKILL WITHOUT SUPERVISION OR ASSISTANCE WITH PROFICIENCY IN SPEED AND QUALITY
3	CAN PERFORM THIS SKILL SATISFACTORILY WITHOUT ASSISTANCE AND OR SUPERVISION
2	CAN PERFORM THIS SKILL SATISFACTORILY BUT REQUIRES PERIODIC SUPERVISION AND/OR ASSISTANCE
1	CAN PERFORM SOME PARTS OF THE SKILL SATISFACTORILY BUT REQUIRES INSTRUCTION AND SUPERVISION TO PERFORM THE ENTIRE SKILL
0	HAS SOME KNOWLEDGE AND LIMITED EXPERIENCE BUT NOT SUFFICIENT FOR PARTICIPATION IN A WORK ENVIRONMENT

Ratings on the chart are based on industrial performance standards. They are confirmed by an instructor (a skilled and experienced person from the occupation) who views and evaluates performance as he would in the role of an employer or supervisor.

Instructor _____

Date _____

A letter of reference attesting to the individual's attendance, punctuality, and work habits is available from the Registrar's office.

ASSIST IN DESIGN OF INDIVIDUAL LEARNER PROGRAMS	PARTICIPATE IN OCCUPATIONAL ANALYSIS	PARTICIPATE IN OUTLINING SKILL PROFILES	ORIENT LEARNERS TO OCCUPATIONAL REALITIES	ASSESS LEARNER BACKGROUND FOR GOAL ACHIEVEMENT	ORIENT LEARNERS TO INSTITUTION RESOURCES	ORIENT LEARNERS TO CHART	ASSIST LEARNER IN ESTABLISHING PRIORITIES AND GOALS
EVALUATE LEARNER PROGRESS	UTILIZE LEARNER SELF RATINGS IN DETERMINING RATING LEVEL	RELATE RATING SCALE TO INDUSTRIAL PERFORMANCE	ORIENT LEARNERS TO PERFORMANCE REQUIRED FOR RATING	ASSIST LEARNER TO BE SELF DIRECTIVE IN RATING AND OBTAINING VERIFICATION	RECOGNIZE INTERIM OR PROGRESSIVE SKILL ACHIEVEMENTS	ASSIST LEARNERS TO IDENTIFY OCCUPATIONAL READINESS	ASSIST LEARNERS TO IDENTIFY INTER RELATIONSHIPS BETWEEN SKILLS FOR RATING PURPOSES
CREATE AND MAINTAIN LEARNING ENVIRONMENT	CREATE & MAINTAIN SUPERVISOR EMPLOYEE RELATIONSHIP WITH LEARNERS	SET UP AND MAINTAIN RESOURCE CENTRE	PROMOTE LEARNER APPLICATION OF TECHNICAL VOCABULARY	PLAN FOR LEARNER ACCESS TO INSTRUCTOR(S) OR OTHER HUMAN RESOURCES	ADAPT TRAINING ENVIRONMENT TO REFLECT INDUSTRIAL CHANGES	SET UP TAPE RECORDERS AND AUDIO PLAYBACK UNITS FOR LEARNER USE	SET UP V.T.R PLAYBACK EQUIPMENT FOR LEARNER USE
ASSIST LEARNERS IN OCCUPATIONAL SKILL DEVELOPMENT	SIMULATE WORK ENVIRONMENT	ANTICIPATE AND CONTROL HAZARDOUS SITUATIONS	PROVIDE MODEL OF OCCUPATIONAL ROLE BEHAVIOR THROUGH EXAMPLE	DEMONSTRATE EQUIPMENT OPERATION	COUNSEL AND ASSIST LEARNER DURING INITIAL USE OF EQUIPMENT OR TOOLS	DEMONSTRATE PHYSICAL DEXTERITY SKILLS	DEMONSTRATE OPERATIONAL PROCEDURES
ASSIST IN SELF LEARNING	DEMONSTRATE OPERATION OF LEARNING HARDWARE	ASSIST LEARNER IN LOCATING AND ANALYZING SAMPLES OF COMPLETED WORK	ASSIST LEARNER IN SELECTING FROM SEVERAL INFORMATION OPTIONS	ASSIST LEARNER IN INITIATING USE OF REFERENCE BOOKS AND P.I. MATERIALS	ASSIST LEARNER IN DETERMINING WHEN HE HAS ADEQUATE INFORMATION	ASSIST LEARNER IN ESTABLISHING AND MAINTAINING RELEVANCE OF RESOURCE CONTENT	ASSIST LEARNER TO DEVELOP & MAINTAIN INFORMATION GATHERING NOTES AND RECORDS
DEVELOP LEARNING MATERIALS	PREPARE OVERLAY TRANSPARENCIES	DESIGN QUESTIONNAIRES AND EXERCISES	PREPARE MATERIAL THAT LINKS, EXPANDS OR HIGHLIGHTS EXISTING RESOURCE MATERIAL	SKETCH CHARTS, DIAGRAMS AND SCHEMATICS	PREPARE STILL SCRIPTS	DEMONSTRATE SKILLS OR PROCEDURES FOR VIDEO TAPING AND MOTION PICTURE PRESENTATIONS	PARAPHRASE AND TRANSPOSE OR RECONSTRUCT PRINTED MATERIALS
COMMUNICATE WITH LEARNERS	PROVIDE TECHNICAL INFORMATION AT LEARNER LEVEL	EXPLAIN AND DISCUSS CONCEPTS AT LEARNER LEVEL	ASSIST LEARNER IN PLANNING JOB SEARCH AND OCCUPATION ENTRY	ASSIST LEARNER TO DEVELOP CONFIDENCE IN PLANNING OWN DEVELOPMENT	COUNSEL LEARNER IN MATCHING SKILL PROFILE AND INTEREST TO SPECIFIC JOBS	LISTEN TO AND DISCUSS LEARNER PROBLEMS NOT DIRECTLY RELATED TO PROGRAM	LISTEN TO LEARNER AND DISCUSS PROGRESS IN BEHAVIOR CHANGE
COMMUNICATE WITH STAFF IN TRAINING ENVIRONMENT	PREPARE ANECDOTAL RECORDS	PREPARE FOR AND PARTICIPATE IN CASE CONFERENCES	TAKE POSITIVE ACTION IN INITIATING DESIRED COMMUNICATION	MAINTAIN POSITIVE APPROACH IN COMMUNICATING	STIMULATE AND MAINTAIN INFORMAL COMMUNICATION WITH OTHER STAFF	OFFER CONSTRUCTIVE CRITICISM	EXPRESS PROGRAM NEEDS FOR ACTION
INTERACT WITH THE COMMUNITY	PROVIDE BALANCED DESCRIPTION OF PROGRAM STRENGTHS AND WEAKNESSES	ASSESS EMPLOYER PROBLEMS AND ILLUSTRATE VALUE OF TRAINED PERSONNEL	CONTACT INDUSTRY AND AGENCIES TO IDENTIFY EMPLOYMENT OPPORTUNITIES	PROVIDE DESCRIPTIONS AND DEMONSTRATIONS OF NEW TECHNOLOGY AND CONCEPTS	ESTABLISH AND UTILIZE ADVISORY COMMITTEE FOR OCCUPATION	PROVIDE ON-SITE DEMONSTRATIONS OF NEW TECHNIQUES AND EQUIPMENT	INITIATE EMPLOYER-LEARNER CONTACT LEADING TO POTENTIAL EMPLOYMENT
DEVELOP PERSONAL COMPETENCIES	MAINTAIN CONFIDENTIALITY	CAPITALIZE ON PERSONAL STRENGTHS	IDENTIFY AND EVALUATE COMMUNICATION WEAKNESSES	IDENTIFY AND EVALUATE TECHNICAL STRENGTHS AND WEAKNESSES	IDENTIFY AND EVALUATE PERSONAL STRENGTHS AND WEAKNESSES	PROJECT IMAGE OF ROLE OF INSTRUCTOR IN LEARNING SYSTEM	DEVELOP AND MAINTAIN PERSONAL CODE OF PROFESSIONAL ETHICS
PERFORM ADMINISTRATIVE OR RELATED FUNCTIONS	CONTROL AND BALANCE EXPENDITURES WITHIN BUDGET	PARTICIPATE IN AND CONTRIBUTE TO MULTI-DEPARTMENTAL TASK FORCES	DELEGATE ADMINISTRATIVE AND CONTROL RESPONSIBILITY TO LEARNERS	NEGOTIATE FOR AVAILABLE SPACE AND RESOURCES	ASSEMBLE AND MAINTAIN RESOURCE REFERENCE FILES	MANAGE RECORD KEEPING SYSTEM	RECOMMEND TERMINATION OF LEARNERS
	INTERVIEW AND MAKE RECOMMENDATIONS REGARDING PROSPECTIVE STAFF	COUNSEL STAFF TOWARD PROFESSIONAL DEVELOPMENT	RECOMMEND TERMINATION OF STAFF	INTERPRET AND APPLY GOVERNMENTAL LAWS AND REGULATIONS	INTERPRET AND APPLY INSTITUTIONAL POLICIES AND REGULATIONS		

ASSIST LEARNER IN APPORTIONING TIME	ASSESS REALITY OF LEARNER RECOGNITION OF GOAL REACHING DEMANDS	ASSIST LEARNER IN SELECTING PROJECTS OR ACTIVITIES FOR DEVELOPMENT & APPLICATION OF SKILLS	DETERMINE AND ASSESS LEARNER CAREER GOAL DECISIONS	OUTLINE AND DESCRIBE RANGE OF EXTRA RESOURCES	DETECT SPECIFIC WEAKNESSES AND PRESCRIBE REMEDIAL LEARNING					
ASSESS PROBLEM SOLVING SKILLS	EVALUATE NON-OBSERVED PERFORMANCE	UTILIZE ASSESSMENTS MADE BY OTHERS	EVALUATE SKILL THROUGH ANALYSIS OF PRODUCT OR WORK PROGRESS	EVALUATE OBSERVED PERFORMANCE	EVALUATE REALITY AND IMPORTANCE OF LEARNER EXPRESSED PROBLEMS OR REACTIONS	SET UP AND MAINTAIN EVALUATION INTERVIEW SCHEDULE	CONDUCT ENTRY RATING INTERVIEWS	ORIENT LEARNERS TO RATING PROCESS	CONDUCT EXIT RATING SESSIONS	ANALYZE INDIVIDUAL AND GROUP ACHIEVEMENT RECORDS TO ISOLATE PATTERNS AND PROBLEMS
SET UP FILM EQUIPMENT FOR LEARNER USE	MAINTAIN TRAINING AIDS, EQUIPMENT AND SIMULATORS	EVALUATE O.J.T. LEARNING ENVIRONMENT	SPECIFY SKILLS FOR DEVELOPMENT AND EXPERIENCES FOR O.J.T.	ASSESS AVAILABLE RESOURCES AND PLAN AND SCHEDULE ACCESS FOR LEARNER NEEDS	ANALYZE, SPECIFY AND JUSTIFY SPACE REQUIREMENTS	PLAN LAYOUT OF LEARNING ENVIRONMENT	MAKE PROVISION IN PLANNING FOR FUTURE EXPANSION OR MODIFICATION	PLAN AND INTEGRATE TOOL, EQUIPMENT AND MATERIAL STORAGE AND CONTROL	ANALYZE SKILLS & LEARNING ACTIVITIES TO SELECT EQUIPMENT, TOOLS AND SUPPLIES	PREPARE SPECIFICATIONS FOR SPECIALIZED FURNITURE, EQUIPMENT AND STORAGE
APPLY INDUSTRIAL CONDITIONS AND STANDARDS TO PROJECTS OR SIMULATIONS	ASSIST LEARNER IN RELATING THE SKILL TO THE FIELD	ENCOURAGE AND MONITOR PEER ASSISTANCE WITH SKILL DEVELOPMENT	ASSIST LEARNER IN APPLYING PROBLEM SOLVING TECHNIQUES	SIMULATE TASK OR PROBLEM SITUATIONS AND CONDITIONS	ASSIST LEARNER IN LOCATING EXTERNAL SKILL DEVELOPMENT ACTIVITIES AND RESOURCES	ASSIST LEARNER IN RECOGNIZING SKILL DEVELOPMENT LIMITATIONS OF ENVIRONMENT	ASSIST LEARNER IN ACQUIRING SPECIFIC RELATED SKILLS	CREATE TEAM PROJECTS OR SIMULATIONS	CREATE INTER-OCCUPATION PROJECTS OR SIMULATIONS	SELECT OR DEVISE WORK RELATED PROJECTS OR ASSIGNMENTS
ASSIST LEARNER IN ESTABLISHING RELEVANT OCCUPATIONAL THOUGHT PROCESSES	ORIENT AND INVOLVE OUTSIDE RESOURCE SPECIALISTS	IDENTIFY CLASSIFY AND SELECT METHODS OF LEARNING	ENSURE THAT LEARNER GETS DIRECT FEEDBACK FROM CUSTOMER, CLIENT OR O.J.T.	DETECT IMMEDIATE LEARNER NEEDS	ASSIST LEARNER IN IDENTIFYING, RELATING & BALANCING SHORT TERM AND LONG TERM GOALS	ASSIST LEARNER IN ESTABLISHING AND MAINTAINING RELEVANCE OF ACTIVITIES TO GOALS	ASSIST LEARNER IN RECOGNIZING AND IDENTIFYING OWN ACHIEVEMENTS	INVOLVE LEARNER IN CONCURRENT ACTIVITIES TO SUSTAIN ENTHUSIASM	CREATE SITUATIONS TO FORCE LEARNER TO IDENTIFY FAULTY PERCEPTION PATTERN	CREATE SITUATIONS TO FORCE LEARNER TO IDENTIFY FAULTY PERSONALITY TRAITS
REVIEW AND SELECT AVAILABLE RESOURCE MATERIALS	PREPARE TAPE, SLIDE OR STRIP PRESENTATIONS	PREPARE AUDIO TUTORIAL PRESENTATIONS	PREPARE AUDIO TAPES	ANALYZE PERFORMANCE TO DETERMINE NEED FOR ADDITIONAL INFORMATION	KEEP LEARNING RESOURCES CURRENT	PREPARE STUDIO VIDEO TAPES	PREPARE ON-LOCATION VIDEO TAPES	PREPARE DIMENSIONAL MODELS AND MOCKUPS	ANALYZE PERFORMANCE TO DETERMINE NEED FOR ALTERNATE MEDIA	ANALYZE DEFINED SKILLS TO DETERMINE INFORMATION NEEDS
STIMULATE INFORMAL GROUP DYNAMICS	LEAD AND STIMULATE GROUP DISCUSSIONS	IDENTIFY AVOIDANCE OR LACK OF COMMUNICATION OF PROBLEMS	ASSESS CURRENT COMMUNICATION AND OPEN NEW CHANNELS	ASSIST LEARNER IN PLANNING OCCUPATIONAL GROWTH	ANTICIPATE AND DETECT REACTION TO INSTITUTION AND PROGRAMS	ASSESS SITUATION, DECIDE ON ACTION AND COUNSEL LEARNERS	ORIENT LEARNER TO THE LEARNING SYSTEM	DETECT LACK OF UNDERSTANDING	APPLY INTERVIEW TECHNIQUES	
CHAIR MEETINGS AND COMMITTEES	CONTRIBUTE TO MEETINGS	PRESENT CASES WITHIN FRAMEWORK OF BASIC MODELS OR PHILOSOPHY	SOLICIT OPEN ASSESSMENTS OF AND IDEAS FOR PROGRAM	RECOGNIZE AND CLARIFY ROLE IN TRAINING ENVIRONMENT	PREPARE WRITTEN REPORTS	PRESENT ORAL REPORTS	ASSIST OTHERS IN PRESENTING IDEAS WITHIN FRAMEWORK OF BASIC MODELS	DISSEMINATE AND GENERATE DISCUSSIONS ON ISSUES, OCCURRENCES OR TRENDS IN SYSTEM	PRESENT & DISCUSS PREDICTIONS OR RESULTS OF TRENDS OR MODIFICATIONS IN SYSTEM	SET ASIDE PERSONAL CONFLICTS OR OTHER ISSUES TO MAINTAIN COMMON GOAL
ASSIST EMPLOYERS IN PLANNING FURTHER TRAINING	ORGANIZE AND CONDUCT EMPLOYMENT PROBLEM WORKSHOPS	ORGANIZE AND CONDUCT INFORMATION PRESENTATION MEETINGS	DESCRIBE HOW SYSTEM AFFECTS THE LEARNER	DEFINE ROLE OF INSTITUTION AND PROGRAM IN THE COMMUNITY	DESCRIBE ROLE OF LEARNER IN THE SYSTEM	ORIENT CO-OPERATING AGENCIES OR ASSOCIATIONS TO ROLE OF INSTITUTION	INTERPRET LEARNER PROFILE AND POTENTIAL TO EMPLOYERS	ORIENT PROSPECTIVE EMPLOYERS TO PROGRAM, PHILOSOPHY AND BENEFITS	ANALYZE AND CLASSIFY THE IMMEDIATE EMPLOYMENT COMMUNITY	ASSIST CO-OPERATING AGENCIES OR ASSOCIATIONS
RECOGNIZE AND EVALUATE OWN PERSONAL BEHAVIOR CHANGE	QUESTION OWN ASSUMPTIONS ON ADULT EDUCATION	RECOGNIZE AND CLASSIFY ADULT LEARNING SITUATIONS	KEEP ABREAST OF CHANGING PATTERNS, NEEDS, ATTITUDES, OF LEARNER POPULATION	CONTRIBUTE TO PROFESSIONAL WORKSHOPS AND DISCUSSIONS	REVIEW, ANALYZE AND EXTRACT FROM JOURNAL ARTICLES	DEVELOP OPTIMAL PERSONALIZED APPROACH AND THOUGHT PROCESSES	MAINTAIN PACE WITH ADVANCES IN OCCUPATIONAL SPECIALTY	KEEP ABREAST OF CHANGES IN FIELD	KEEP ABREAST OF LEVELS OF PERFORMANCE AND PERSONAL DEMANDS OF OCCUPATION	DETERMINE PROFESSIONAL GROWTH OPPORTUNITIES
INITIATE LEARNER FOLLOW-UP PROCESS AND MAINTAIN RECORDS	PARTICIPATE IN DEVELOPING RECORD KEEPING SYSTEM	CONDUCT INTAKE INTERVIEWS AND RECOMMEND SELECTION OR REJECTION	ESTIMATE CAPITAL COST REQUIREMENTS	ESTIMATE OPERATING COST REQUIREMENTS	PREPARE ESTIMATES OR BUDGET PROPOSAL	COLLECT AND ANALYZE USAGE DATA TO PLAN ENVIRONMENT OR RESOURCE CHANGES	PLAN AND CO-ORDINATE STAFF WORKLOADS	MAINTAIN INVENTORY AND REQUISITION EQUIPMENT, SUPPLIES AND MATERIALS	PARTICIPATE IN PLANNING NEW PROGRAMS RELATED TO FIELD	WRITE EQUIPMENT AND MATERIALS SPECIFICATIONS

CREATE SITUATIONS THAT FORCE LEARNER TO EXAMINE TERMINATION ALTERNATIVES	IDENTIFY LEARNER REQUIREMENT FOR TEMPORARY EXIT	IDENTIFY LEARNER INABILITY TO PROGRESS	REQUEST AND EVALUATE REPEAT PERFORMANCE IN CASES OF RATING UNCERTAINTY	RECOGNIZE INACCURATE RATINGS	CONDUCT RE EVALUATION SESSIONS	ASSIST LEARNERS IN IDENTIFYING EXTERNAL FACTORS CAUSING LACK OF PROGRESS

COUNSEL LEARNER IN SELECTION OF EQUIPMENT AND RESOURCES FOR TASK AT HAND	APPLY QUESTIONING TECHNIQUES TO ASSIST LEARNER IN SKILL DEVELOPMENT	ASSIST LEARNER IN SELECTING OR MODIFYING SKILL DEVELOPMENT APPROACH	ASSIST LEARNER IN LOCATING TECHNIQUES AND INFORMATION IN OTHER OCCUPATIONS	CAPITALIZE ON INTERESTS OR ABILITIES SELECTING SKILL DEVELOPMENT APPROACH	ADAPT SKILL DEVELOPMENT PROCESS & RESOURCES TO LEARNERS PERSONAL OBJECTIVES	MONITOR LEARNER IN NEW DISCOVERY LEARNING SITUATIONS	COUNSEL LEARNER IN ACQUIRING REMEDIAL SKILL DEVELOPMENT ASSISTANCE	IDENTIFY LEARNER LIMITATIONS AND ASSIST IN ADAPTING TO DESIRED PERFORMANCE	

DEVISE SITUATIONS FOR LEARNER TO ASSESS PERSONAL BEHAVIOR & CHARACTERISTICS	VARY APPROACHES TO ACTIVITIES OR PROJECTS TO SUSTAIN ENTHUSIASM AND INTERESTS	IDENTIFY BEHAVIORAL TRAITS NOT CONDUCIVE TO SELF LEARNING	IDENTIFY REAL OR POTENTIAL INTERPERSONAL CONFLICTS OR RELATIONSHIPS	RECOGNIZE PERSONALITY TYPES AND ADJUST ENVIRONMENT TO SUIT	CREATE SITUATIONS THAT FORCE LEARNER TO IDENTIFY SPECIFIC LEARNING DIFFICULTIES	CREATE SITUATIONS THAT FORCE LEARNER TO FACE REALISM OF OWN DECISIONS	CAPITALIZE ON STUDENT RELEVANT PROBLEMS TO STIMULATE SELF DIRECTIVE ACTION	OVERCOME PERSONALITY PROBLEMS BY TEAMING COMBINATIONS OF PERSONALITY TYPES	COUNSEL LEARNER IN IDENTIFYING SELF LEARNING HINDRANCES

OPERATE REPRODUCTION EQUIPMENT	WRITE PERFORMANCE OBJECTIVES	PREPARE INDIVIDUALIZED LEARNING PACKAGES	ANALYZE DEFINED SKILLS TO DETERMINE SUITABLE MEDIA FOR INFORMATION PRESENTATION	PREPARE SHOOTING SCRIPT FOR MOVIE OR LOOP PRESENTATIONS	ASSESS COST, TIME, CONVENIENCE, URGENCY AND EFFECTIVENESS IN SELECTING MEDIA	SELECT RESOURCES AND MEDIA ON BASIS OF AVAILABILITY FOR CONTINUED LEARNING	PREPARE PROGRAMMED INSTRUCTIONAL MATERIALS	INTERPRET AND APPLY COPYRIGHT LAWS

DETECT, DISCUSS AND ASSESS DEVIATION FROM SYSTEMS MODELS	COUNSEL & MONITOR O.J.T. SUPERVISOR IN SKILL DEVELOPMENT ACTIVITIES	ORIENT STAFF

VISIT INDUSTRIES OR OPERATIONS TO DETECT CHANGES IN FIELD	FOLLOW-UP FORMER LEARNERS TO ASSESS PROGRAM EFFECTIVENESS	DETECT TRAINING AND TRAINEE PROBLEMS IN THE OCCUPATION	PARTICIPATE IN P.R. RELATED ACTIVITIES IN THE COMMUNITY

PLAN PERSONAL GROWTH

PROJECT FUTURE ENROLLMENT TO MEET EMPLOYMENT DEMANDS	PARTICIPATE IN PLANNING EXTENSIONS OF PROGRAMS TO NEW POPULATIONS	PLAN & CONTROL EXTENSION OF DEPARTMENT RESOURCES TO NON-OCCUPATIONAL POPULATION	PREPARE JOB DESCRIPTIONS	DOCUMENT AND PRESENT PROGRAM NEED AND JUSTIFICATION PROPOSAL	PLAN AND JUSTIFY ADJUSTMENTS OR CHANGES WITHIN PROGRAM	ESTIMATE AND JUSTIFY SPACE AND STAFF REQUIREMENTS	DELEGATE RESPONSIBILITY TO STAFF AND COLLEAGUES	DETECT NEED FOR PROGRAM CHANGE AND INITIATE REVIEW PROCESS	PLAN AND SCHEDULE STAFF LEAVES	EVALUATE AND REPORT ON STAFF PERFORMANCE

DEVELOPED BY

HOLLAND COLLEGE

IN COOPERATION WITH

BUSINESS AND INDUSTRY

CHARLOTTETOWN P.E.I.

DECEMBER 15, 1971
1ST REVISION JUNE, 1976

IX. ORIENTATION OF PERSONNEL

The Need

It is not enough that the staff development coordinator is convinced of the need to implement a competency-based staff development program. If the installation of a CBSD program is to be supported, and if it is to be successful, it will require the understanding and cooperation of administrators and teachers throughout the institution. In this case, the key to understanding is information, and the basis for cooperation is commitment.

Because the competency-based approach is a relatively new strategy in personnel development, many individuals will have only a limited knowledge of CBSD principles and their practical implications. Others will have some knowledge which may be distorted through inaccurate information. Consequently, an orientation program is in order as one of the first steps toward achieving acceptance of a competency-based staff development program. Such a program should be designed to reach all members of the groups concerned and should provide them with accurate information about CBSD.

Topics for Consideration in the Orientation Process

The goals of the orientation program are to improve understanding, and change attitudes, values, and behavior patterns of those involved in staff development. Many of these attitudes and values are closely tied to the individual's concept of

himself or herself as a professional, and are thus resistant to change. The process of orienting teachers, administrators and appropriate others to the concepts of and reasons for competency-based staff development should not be underestimated, nor should it be undertaken without careful planning and forethought. The listing which follows includes the groups of individuals who need orientation to CBSD and suggests possible content areas for the orientation program. The emphasis given to each topic will need to be determined according to the group's previous understanding and experience. In most circumstances, however, the initial phases of the orientation process should deal with general principles rather than specific problems. The main objectives at this stage should be to lay the groundwork for subsequent discussion, to correct inaccurate information regarding the competency-based approach, and to allay the mistrust and anxieties which often accompany an introduction of new ideas.

Administrators

- The need for effective and systematic staff development
- The need for change in staff development
- CBSD Program concepts and characteristics
- Potential effect of the CBSD approach
- Selection of competencies based on teacher's needs
- Training teachers in an actual school setting
- General estimate of costs
- Administrative strategies
- Effect on personnel (staffing, i.e. need for resource persons, steering committee)
- Ongoing programs in other institutions
- Proposed instructional materials and procedures

Teachers

- Basic concepts of CBSD
- Selection of competencies based on teacher needs
- Relationship of CBSD to improved teaching performance

Personalized approach to professional development
Modules and independent learning
Roles of the teacher and the resource person

Resource persons

Concepts and characteristics of CBSD
Potential effect of CBSD
Proposed instructional materials and procedures
The instrumental role of the resource person: helper/facilitator, advisor/counselor, evaluator/assessor

State Education Agency Personnel

The potential of CBSD for teacher improvement
Relationship of CBSD to public pressures for accountability
Identification and acceptance of teacher competencies as a basis for certification
Ongoing CBSD programs in other states
The role of the state agency in supporting CBSD efforts

Orientation Techniques

Information about CBSD and orientation to its concepts can be presented to target groups in a number of ways. Whatever the format, the process should be, in essence, one of communication, not coercion; discussion rather than decree. In selecting communication techniques, the staff development coordinator should consider the following:

- Informal conversations with individuals and small groups
- Small- and large-group discussions
- Conferences and workshops
- Group retreats
- Formal presentations and symposiums
- Brochures, position papers, and other documents
- Multi-media techniques

To bring a sense of realism, practicality, and urgency to the CBSD awareness effort, two other approaches are especially worthwhile. One is to invite to the institution an outside consultant (or group of consultants) who have had experience in implementing CBSD programs. In many cases, outside consultants serve to enhance an institution's receptivity to CBSD. Another extremely valuable activity is to arrange for a selected group of local teachers and administrators to visit the sites of on-going CBSD programs. The enthusiasm of CBSD adherents is usually infectious, and such visitations provide a level of understanding which may not be achieved otherwise.

X. EVALUATING THE STAFF DEVELOPMENT PROGRAM

Why Evaluate CBSD Programs?

The answer to the question "why evaluate?" usually varies from one program to another. In fact, different people working in the same program often answer the question differently. Therefore, it becomes obvious that there is no single "right" reason to evaluate a particular CBSD program. Five (5) reasons to evaluate CBSD programs can be identified:

Figure 1 - Why Evaluate?

		Example
(1)	To determine whether the CBSD program is accomplishing the objectives it was designed to accomplish (both overall CBSD objectives and teacher objectives	Are the instructors utilizing resource persons?
(2)	To identify strengths and weaknesses of the CBSD program so that quality of staff development may be improved.	Is classroom-type staff development followed by on-the-job experience, a successful learning technique?
(3)	To determine whether the inputs of training (e.g., cost, time efforts) justify the benefits or outcomes of the CBSD programs.	Do the outcomes from CBSD programs justify the costs?
(4)	To establish a data base which can be used by policy-makers as an input in the decision making.	Are the instructors attending all staff development sessions?
(5)	To identify unintended outcomes that are accomplished through the CBSD program.	Is there an increase in cohesiveness among the instructors?

Each CBSD program will be evaluated for different combinations of reasons, and the priority of the reasons probably will vary. However, in general, it can be said that the CBSD programs will be evaluated in order to improve the staff training as it operates (formative evaluation) and to determine the overall success and impact of the program (summative evaluation). The information gathered through the evaluation process should aid in decision-making when revising the CBSD program, both midstream and after it has been completed.

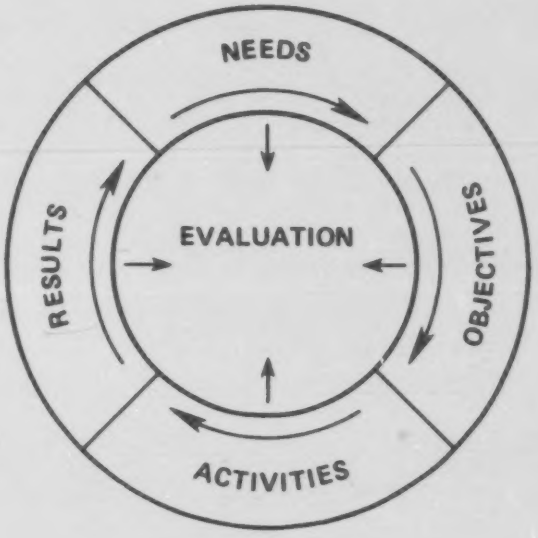
What is Evaluation?

As with the question "Why Evaluate?", the term "Evaluation" has different meanings for different people. The confusion that arises over a definition may be simplified a bit if we think of evaluation as a process that we use daily in our personal lives to help us make decisions. For example, when choosing whether to purchase shoe A or shoe B, we ask ourselves a number of questions regarding prices, comfort, style, and color to name a few considerations. After deliberating, we make a choice, i.e., we have evaluated which shoe to purchase based upon our need for the shoe and the other relevant considerations mentioned above. Specifically, we have ascertained the value or worth of each shoe using criteria (price, comfort, etc). This is the heart of the evaluation process, our working definition.

Our definition may be broadened by looking at the purpose of the evaluation process. The purpose of evaluation, according

to Daniel Stufflebeam (1971), is not to prove but to improve. He ties the evaluation process closely to decision-making. Another way of expressing the multi-dimensionality of evaluation may be visualized in Figure 2.

Figure 2 – Evaluation is an Ongoing Process



Program Evaluator's Guide,
Educational Testing Service, 1977

The diagram depicts evaluation as an ongoing process. It is cyclical, i.e., it occurs before the CBSD plan begins, during the implementation of the CBSD plan and after the CBSD plan is completed. It illustrates that the evaluation of the CBSD plan cannot exist as a separate entity--it must be developed as an integral part of the CBSD plan. If we look at the diagram

closely, the above points can be tied together. Evaluation is considered to be the nucleus of the process. Since it is at the core, it interacts with:

Figure 3 - Multi-dimensionality of Evaluation

Dimension	Definition of Dimension	Example
(1) Needs Assessment	Evaluate to determine the needs that support the existence of the CBSD program.	The need exists for training in the use of media techniques of instruction.
(2) Objectives	Evaluate to determine if the program objectives are consistent with the information from the needs assessment.	The objectives (to be able to use filmstrips, transparencies, etc.) are evaluated and found to be consistent with the need to use media techniques in instruction.
(3) Activities	Evaluate to determine if the planned activities are meeting the objectives.	The individualized training in media techniques and practice sessions are designed to meet the objectives.
(4) Results	Evaluate to determine if the activities produce the desired results, as identified in the objectives, based upon the needs assessment. This information also becomes part of the data base for a new needs assessment.	The participants understand the various media techniques available. They have incorporated them into teaching activities. Additional training in videotaping techniques is desired by 80% of the participants.

The diagram suggests there is a constant feedback between evaluation activities and each of the four (4) areas. This feedback leads to revision of the CBSD plan. THEREFORE, WE SHOULD LOOK AT EVALUATION AS A TOOL THAT HELPS US TO ASCERTAIN THE VALUE OR WORTH OF THE CBSD PLAN AT DIFFERENT POINTS IN TIME. THE INFORMATION GATHERED THROUGH THE EVALUATION PROCESS WILL PROVIDE DECISION-MAKERS WITH INFORMATION THAT CAN LEAD TO REVISIONS OF THE CBSD PLAN.

How Do You Plan an Evaluation?

Before an evaluation method is chosen or a specific evaluation tool is designed, the evaluation should be planned. One way to think out the evaluation process in order to fit your needs is to answer the question: Who needs what information, when and in what format? Figure 4 illustrates this process:

Figure 4 - Planning the Evaluation

Questions	Definition of the Question	Example
Who?	Who is the information collected for?	Dean
What?	What information should be collected?	Effectiveness of Inservice Training
When?	When does the dean need this information?	May 28, 19___
What Format?	How will it be shared? (Think about how the dean will use the information.)	Short written report listing the strengths, weaknesses, and recommendations for improving inservice training.

What Types of Evaluation Methods Are Available?

After you have determined who needs what information, when and in what format, the next step in the evaluation process is to identify the type(s) of evaluation methods that best serves your needs based upon (1) the phase of the CBSD plan and (2) the possible decisions to be made at each phase of the CBSD plan. These relationships are illustrated in Figure 5.

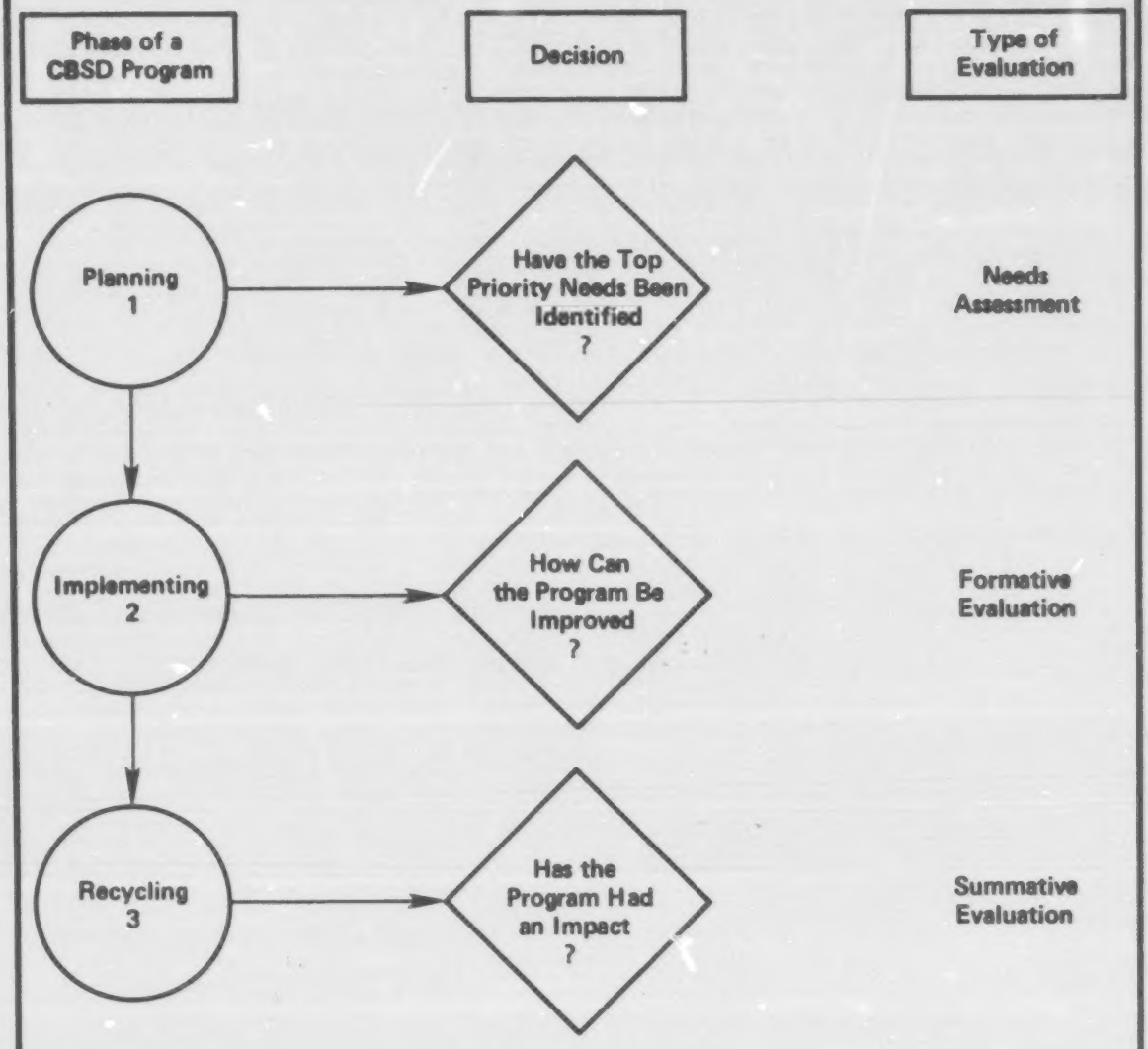
(A) Needs Assessment - See Chapter III

(B) Formative and Summative Evaluation - Formative evaluation activities occur when the CBSD program is in progress. Even the best laid plans need to be reshaped and refocused once implemented. Its goal is to improve the staff development program activities as it progresses by red-flagging those areas requiring mid-stream corrections. Formative evaluations usually center around four (4) questions:

1) Is the CBSD program still on target with its objectives?
2) What are the strengths and/or best features of the CBSD program?
3) What are the weaknesses and/or problem areas of the CBSD program?
4) How can the CBSD program be improved?

Summative evaluation on the other hand, looks at the sum worth of the CBSD program after it has completed a cycle. It should be noted that formative and summative evaluations are not mutually exclusive, but should be complementary. The distinction between formative and summative evaluations can be illustrated by thinking of an airplane trip from New York City to Columbus.

Figure 5 - Types of Evaluation



Adapted From: Adams, Kay Angona and Walker, Jerry P., Improving the Accountability of Career Education, The Center for Vocational Education, 1977.

A summative evaluation would primarily be concerned with whether the airplane arrived at its destination on time. The formative evaluation would occur in flight and would monitor the distance achieved per hour versus the planned arrival time. If the formative evaluation shows that the airplane will be late in arriving, the crew could then alter its speed, course, etc. in order to try to meet the planned arrival time.

Formative Evaluation of CBSD Program

The type of formative evaluation activities used with CBSD programs will vary based upon individual needs. Paper-and-pencil measures are often used, such as questionnaires, cognitive tests, attitude scales, and performance tests. However, other measures, such as interviews, simulations, review of records (e.g., attendance), assessment of products developed by learners, reviews by external panels, case histories, and systematic observation, are not traditional measures, but can provide the evaluator with a wealth of information. Four (4) specific methods are presented below:

1) Informal feedback from participants is a useful tool that allows the staff development coordinator to get immediate feedback from participants regarding the quality of training, effectiveness of the presentation and the physical facilities.

2) Observation during the training session will allow the staff training director (or advisory committee) to monitor the extent of group interaction (e.g., questions, participation, note-taking, etc.)

3) Questionnaires may be used to ask participants their perceptions of the strengths and weaknesses of the training session, quality of the training session,

important materials or topics they perceived covered, physical facilities, etc. (See Sample #1, 2, and 3).

4) Diagnostic Performance instruments may also be used, especially if the CBSD program is modular in nature. The performance instruments would be used by the supervisors to determine if participants have mastered the competencies taught in that training component before he/she progresses. If this method is chosen, the criteria for acceptable performance should be clearly defined. This type of evaluation at selected points in the CBSD program is important because should a competency not be mastered by participants, it will be identified and the CBSD program can be altered (or "improved") to include a second review of that competency before the program progresses. (See Sample #4).

The four (4) formative evaluation methods listed above are complementary. The more methods used, the more comfortable you may feel with the evaluation results collected. However, it should be remembered that evaluation is a tool to improve the CBSD program; so, the evaluation methods you choose should be helpful, rather than burdensome.

Summative Evaluation of CBSD Program

The summative evaluation activities may have two foci which are not mutually exclusive: the overall evaluation of CBSD activities and the impact of the CBSD program.

Overall Evaluation of the CBSD Activities. This type of evaluation is usually in a questionnaire format. It is geared toward looking at the CBSD activities from an overall perspective, since how the "pieces of the puzzle" of the CBSD activities program fit together should be clear to the participants by this point. To achieve this overall perspective, the questionnaire may tap, for example, organizational items (e.g., physical facilities,

length of training); stronger and weaker features of the training program; suggestions for improvements; substantive areas requiring additional training; etc. (See Sample #5).

Evaluation of the Impact of the CBSD Program. When evaluating impact, the question arises, what kind of impact? The type of impact to be studied will vary based upon the reasons chosen to evaluate the CBSD program. For example, impact can be evaluated in terms of:

(1) How well were the overall CBSD program objectives met? When assessing the success of meeting objectives, it must be ensured that the objectives are clearly defined so there is little misunderstanding of the intent of the objective. For example, one objective of the CBSD program may be to provide instructors with the knowledge and skills to incorporate media techniques into their teaching by June 1. To measure if this type of objective has been met, a questionnaire format is usually used. These questions may be incorporated in the general evaluation of CBSD activities by the participants (See Sample #5). In addition, the question of the extent to which the objectives were met may also be directed to each participant's supervisor and to institutional administrators (if desired).

(2) How well were teacher objectives met by the CBSD program? As opposed to the overall CBSD program objectives given above, learner objectives "key into" the competencies and skills which each participant should acquire and develop as a result of staff development activities. For example, one

learner objective may be to create transparencies that will be incorporated in each participant's introductory lesson plan. A variety of tests (e.g., performance tests, objective knowledge tests, self-assessments, peer or teacher rating, etc.) may be used to assess each participant's level of performance for each competency included in the training program (both before and after training). This pre/post test design will identify growth of each participant by competency area (Sample #6 illustrates one pre/post design).

(3) How cost effective was the CBSD training? Cost effectiveness evaluation may require specialized expertise to undertake. Although we will not delve into this type of evaluation in detail, a few items should be noted. First, data should be collected in a number of areas, including total program cost per year, per participant and program operation costs. Secondly, when identifying costs, distinguish between start-up costs and yearly operating costs. Start-up costs may be distributed over the life of the equipment or materials to reflect a more realistic cost figure. Thirdly, cost saving practices (e.g., use of volunteers, community resources) should be included.

Summary

1) Although the reasons for evaluation vary, they usually center around determining if the CBSD program objectives were met, strengths and weaknesses of the CBSD program, and the cost-effectiveness of the CBSD activities. The information gathered should be used as an input in decision-making.

2) Evaluation is a tool that helps us to ascertain the value or worth of the CBSD program at different points in time (since evaluation is an ongoing or cyclical process). The information gathered through the evaluation process will provide decision-makers with information that can lead to revisions of the CBSD program (i.e., improvements in the CBSD program).

3) Different types of evaluation methods are available to the evaluator. Needs assessment is discussed in Chapter III. Formative evaluation methods are used while the CBSD program is in operation. Their goal is identifying the strengths of the CBSD program and to red-flag those areas requiring mid-stream corrections. Formative evaluation techniques include, but are not limited to pencil-and-paper measures (e.g., questionnaires, diagnostic performance instruments), interviews, informal feedback and observation. Summative evaluation looks at the sum worth of the CBSD program. It has two foci: evaluation of the overall evaluation of the CBSD activities and the evaluation of the impact of the CBSD activities. The impact evaluation may tap how well the CBSD program met its overall objectives, how well the CBSD program met its learner objectives, and the cost-effectiveness of the CBSD program activities. It should be repeated that needs assessment, formative evaluation, and summative evaluation are complementary evaluation methods that are used at different stages of the implementation of the CBSD program.

SAMPLE #1

Daily Feedback

Please respond to the following topics by checking the response which best reflects your opinion concerning (1) the effectiveness of the presentation(s) in stimulating your thoughts; (2) the potential usefulness of the information presented to apply in your work setting.

How Effective?						Topics	How Useful?					
Not at All	Slightly	Moderately	Highly	Extremely			Not at All	Slightly	Moderately	Highly	Extremely	
						1) Mission of Post-Secondary Education						
						2) Using of Media Techniques in teaching						
						3)						

Possible Open-Ended Questions

1. Briefly describe two positive outcomes that resulted from today's activities for you.

2. For those segments of the training activities which you found least useful, please indicate why (e.g., subject matter, methods used).

3. How could the activities/presentations have been improved?

4. What aspects of today's activities would you like to see emphasized further? Why?

5. What aspects of today's activities would you like to see deleted? Why?

SAMPLE #2

Daily Feedback

Please provide your candid response to the following questions about today's activities. All data will be held in confidence.

Organization

1. The quality of the pre-staff development activity information was

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

2. The meeting facilities were

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

3. The choice of staff development topics were

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

4. The choice of presenters were

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

5. The small-group sessions were

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

6. The large-group sessions were

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

7. The materials distributed were

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

8. The staff development activity as a whole was

Outstanding	Good	Average	Fair	Poor
1	2	3	4	5

Comments:

Content

1. Please record what your major objectives for participating in this training session were.

2. To what extent were the benefits of the program consistent with your major objectives?

Very Much	Considerably	Partially	Somewhat	Not At All
1	2	3	4	5

Comments:

3. To what extent did the information presented add to your knowledge and skills?

Very Much	Considerably	Partially	Somewhat	Not At All
1	2	3	4	5

Comments:

4. Indicate the extent to which you gained new insights on how to improve your professional performance.

Very Much	Considerably	Partially	Somewhat	Not At All
1	2	3	4	5

Comments:

SAMPLE #3

WORKSHOP ON COMPETENCY-BASED ADULT VOCATIONAL INSTRUCTION

Please circle the appropriate rating.

	A HEARTY! YES! GREAT!			NO, LOUSY BOO	ADDITIONAL COMMENTS
1. Did the session deliver what was promised?	1	2	3	4	
2. Was the session relevant to your needs?	1	2	3	4	
3. Do you feel that you learned something useful?	1	2	3	4	
4. Was the level of treatment of topics appropriate?	1	2	3	4	
5. Were the following effective?					
a. visuals	1	2	3	4	
b. workshop notebooks	1	2	3	4	
c. audience participation in large-group sessions	1	2	3	4	
d. small-group sessions	1	2	3	4	
6. Were the deliveries of presentations authoritative?	1	2	3	4	
7. Were the presentations interesting?	1	2	3	4	
8. Were the presentations entertaining?	1	2	3	4	
9. Was the session well organized?	1	2	3	4	
10. Were the overall session activities and ideas interesting?	1	2	3	4	
11. Were the presenters sufficiently prepared and knowledgeable?	1	2	3	4	
12. Was the pre-session information sufficient?	1	2	3	4	

Sample #4

TEACHER PERFORMANCE ASSESSMENT FORM

Develop Student Performance Objective (B-2)

Name _____

Date _____

Resource Person _____

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

LEVEL OF PERFORMANCE

	N/A	None	Poor	Fair	Good	Excellent
Components						
1. All objectives contained a statement of performance ...	☐	☐	☐	☐	☐	☐
2. The performance statements contained an action verb .	☐	☐	☐	☐	☐	☐
3. The performance statements described the activity in which the student would be involved in sufficient detail to be understood	☐	☐	☐	☐	☐	☐
4. All objectives contained stated or implied conditions ..	☐	☐	☐	☐	☐	☐
5. The conditions were realistic in terms of the performance called for	☐	☐	☐	☐	☐	☐
6. All objectives specified criteria for achievement	☐	☐	☐	☐	☐	☐
7. The criteria were realistic in terms of the performance required	☐	☐	☐	☐	☐	☐
8. The criteria were realistic in terms of the conditions outlined	☐	☐	☐	☐	☐	☐
Domains						
9. Cognitive domain objectives were included	☐	☐	☐	☐	☐	☐
10. Cognitive objectives which required more than mere recall were included	☐	☐	☐	☐	☐	☐
11. Psychomotor objectives were included	☐	☐	☐	☐	☐	☐
12. Psychomotor objectives were included which required more than mere imitation of the instructor	☐	☐	☐	☐	☐	☐
13. Affective domain objectives were included	☐	☐	☐	☐	☐	☐

	N/A	None	Poor	Fair	Good	Excellent
14. The affective objectives were realistic in terms of occupational requirements	☐	☐	☐	☐	☐	☐
15. The criteria for the affective objectives provided alternative ways for students to demonstrate the feelings/attitudes	☐	☐	☐	☐	☐	☐
Sequencing						
16. The objectives were arranged in a logical sequence	☐	☐	☐	☐	☐	☐
17. The sequence provided for the accomplishment of enabling objectives before terminal ones	☐	☐	☐	☐	☐	☐
18. The sequence facilitated student accomplishment of the objectives	☐	☐	☐	☐	☐	☐

LEVEL OF PERFORMANCE: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

Levels of Performance for Final Assessment

N/A . . . The criterion was not met because it was **not applicable** to the situation.
None . . . **No attempt** was made to meet the criterion, although it was relevent.
Poor . . . The teacher is unable to perform this skill or has only **very limited ability** to perform it.
Fair . . . The teacher is unable to perform this skill in an acceptable manner, but has **some ability** to perform it.
Good . . . The teacher is able to perform this skill in an **effective** manner.
Excellent . . . The teacher is able to perform this skill in a **very effective** manner.

Source: Performance-Based Teacher Education Project, The Center for Vocational Education, "Develop Student Performance Objectives" (Module B-2), American Association for Vocational Instructional Materials (University of Georgia, Athens).

SAMPLE #5

Summative Evaluation: CBSD Activities

Please provide your candid responses to the following questions about the staff development activities. The information will be used to improve future staff development activities. All data will be held in confidence.

Background Information (Optional)

1. What is your present position?

   _____ Full-time instructor

   _____ Part-time instructor

   _____ Other (specify)

2. How many years have you been in this role? _____

3. In how many other staff development activities have you participated?

   _____ 1 - 3

   _____ 4 - 6

   _____ over 6

Planning and Implementation

Rate the overall quality of the staff development activities by circling the appropriate rating for each of the following items:

		Quality				
		Poor	Fair	Average	Good	Outstanding
1.	Pre-staff development activity information	1	2	3	4	5
2.	Meeting facilities	1	2	3	4	5
3.	Choice of staff development topics	1	2	3	4	5
4.	Choice of presenters	1	2	3	4	5
5.	Small-group sessions	1	2	3	4	5
6.	Large-group sessions	1	2	3	4	5
7.	Simulation group sessions	1	2	3	4	5
8.	Materials distributed	1	2	3	4	5
9.	Staff development activity as a whole	1	2	3	4	5

Staff Development Objectives

Indicate, by circling the appropriate rating, how much impact the staff development activities have had in your ability to do the following:

Objective	Amount of Impact				
	Very Little	Little	Some	Much	Very Much
1. To state a rationale for career development.	1	2	3	4	5
2. To use simulation materials in teaching.	1	2	3	4	5
3.	1	2	3	4	5
4.	1	2	3	4	5
5.	1	2	3	4	5
6.	1	2	3	4	5

Recommendations

1. What were the best features of the staff development activities?

2. What were the weaker features of the staff development activities?

3. What suggestions would you make for improving future staff development activities?

4. Did the staff development activities meet your personal objectives for participating in the training activities?

5. In what areas would you feel additional staff development is required?

SAMPLE #6

Estimate of Performance

(Confidential)

This booklet contains several easy-to-complete items. Please respond to each item as frankly as possible. You need not respond to any item about which you feel reluctant.

The items are designed only to collect information related to the Institute. Your responses will be kept confidential and not used to make any judgmental statements about you or anyone else. In order to match instruments while maintaining anonymity, please use your phone number to identify this and subsequent materials you turn in.

Home Phone No. _____
Date _____
Module No. _____

National Institute for Performance-Based Teacher Education
The Center for Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

1975

Adapt, Utilize and Evaluate PBVTE Curricular Materials

(Module X-101)

Directions: The following tasks describe several of the performance components necessary to effectively adapt, utilize and evaluate PBVTE in an actual institutional setting. Using the definitions for each level of performance given below, you are to respond to several items on the next two pages. First, please study the definitions given below.

Poor:	You are unable to perform this task, or have only very limited ability to perform it.
Fair:	You are unable to perform this task in an acceptable manner, but have some ability to perform it.
Good:	You are able to perform this task in an effective manner.
Excellent:	You are able to perform this task in a very effective manner.

Now, please respond to each of the items by checking (✓) your current estimated level of performance.

A. At this time, how well can you perform (execute) the following tasks?	LEVEL OF PERFORMANCE			
	Poor	Fair	Good	Excellent
1. Identify the need for improving alternative approaches to personnel development in vocational education.				
2. Describe the concepts and rationale underlying the PBTE approach to teacher education.				
3. Describe the nature and use of modularized performance-based professional teacher education curricula.				
4. Compare and explain the differences between PBTE programs and traditional programs of teacher education.				
5. Explain alternative approaches for implementing preservice and in-service performance-based teacher education programs and materials.				
6. Assess individual student needs and select appropriate PBVTE curricular materials for meeting the professional preparation needs of present and prospective vocational teachers.				
7. Develop and make operational an appropriate teaching-learning design for implementing PBVTE curricula components in your institution.				
8. Serve effectively in the teacher educator role as resource person, advisor, and evaluator.				

	Poor	Fair	Good	Excellent
9. Orient prospective and in-service teachers to their role and responsibilities in using performance-based curricular materials.				
10. Evaluate the quality and effectiveness of performance-based materials in developing specified professional teacher competencies.				
11. Objectively assess a teacher's ability to perform specified competencies in an actual classroom situation.				
12. Assist with the training of other vocational teacher educators and administrators who desire to adapt, utilize, and evaluate PBVTE curricula.				

B. How many times have you already adapted, utilized, and evaluated PBVTE in an actual institutional setting?

_____ 0
_____ 1-3
_____ 4-6
_____ 7-9
_____ 10 or more

C. At this time, how well do you feel you could adapt, utilize, and evaluate PBVTE in an actual institutional setting? (Consider all of the tasks involved).

_____ Poor
_____ Fair
_____ Good
_____ Excellent

APPENDIX A

A Review of Literature Concerning the Personnel Development Needs of Post-Secondary Vocational-Technical Teachers

A REVIEW OF LITERATURE CONCERNING THE PERSONNEL DEVELOPMENT NEEDS OF POST-SECONDARY VOCATIONAL-TECHNICAL TEACHERS

By

Audni Miller-Beach
Program Associate

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

INTRODUCTION

Purpose

Occupational education programs increased at an unprecedented rate--both in number and enrollment--during the 1960s. In that period of accelerated growth, the emphasis was on the initiation of programs and the acquisition of facilities. In the 1970s, however, since the programs are established and facilities procured, the priority is directed toward persons, toward the particular needs of students, administrators, and teachers who are involved in occupational education. Implied in this priority is the implementation of programs which will foster the professional growth of teachers and result--ultimately--in the growth of students. With the recognition of personnel development as a valuable mechanism for the improvement of occupational education comes the question of what to include in the content of such programs. Although the issue of a program's substance depends to a great extent on the needs of individual teachers and their respective institutions, it is apparent from the literature that occupational teachers hold in common certain philosophical and pedagogical needs. The purpose of the literature review was to identify these generic

needs. This review, then, is a resource document for use in the design of personnel development programs for teachers of post-secondary occupational education.

Definition of Terms

In order to assure a common understanding of the key terms used throughout this review, the following definitions are offered.

1. Community college is used as a referent for both community and junior colleges.

2. Occupational education is used with reference to vocational-technical education programs conducted in institutions of post-secondary education, including community colleges, technical institutes, area vocational-technical schools, proprietary vocational schools, and senior colleges and universities.

3. Personnel development and staff development are used interchangeably to mean "enhancing talents, expanding the interests, improving the competence, and otherwise facilitating the professional and personal growth" (Gaff, p. 14) of teachers in institutions of occupational education.

4. Teacher is used with reference to the person who instructs post-secondary students. The term instructor is used interchangeably with teacher.

THE EMERGENCE OF OCCUPATIONAL EDUCATION

The rapid expansion of occupational education received its first impetus through the National Defense Education Act of 1958. This act authorized an annual appropriation of $15 million to support "programs linked exclusively to the training of highly skilled technicians in recognized occupations necessary to the national defense" (Strong and Schaefer, p. 9).

Between 1958 and 1968, the increased national demand for technological and skilled manpower mandated--in effect--the expansion of occupational programs at the post-secondary level. The Vocational Education Act of 1963 and the Vocational Education Amendments of 1968 provided additional financial resources for occupational education. According to Medsker and Tillery, "As a result of the Vocational Education Act of 1963 and other enabling federal career legislation passed in the mid-1960s, massive financial support was given to the development of the widest array of occupational training programs in the history of public community college education" (p. 21). Concurrently, community college enrollments increased by 271 percent between 1960 and 1970, and the number of these institutions increased by 61 percent (O'Banion, 1974, p. 24).

The accelerated interest in occupational education at the two-year post-secondary level was recognized in the passage of Title X of the Education Amendments of 1972. Cited as

"the first attempt on the part of Congress to promote community colleges" (Burkett, p. 64), Title X authorized federal and state mechanisms to further the "establishment and expansion" of community colleges and occupational education (Strong and Schaefer, p. 31). While occupational education is also offered in proprietary schools, technical institutes, and senior colleges and universities, the community college is the primary source. In fact, 75% of all occupational education is offered in community colleges (Meeds, 1975).

OCCUPATIONAL EDUCATION: AN EGALITARIAN MISSION

Literature concerning community colleges emphasizes an institutional philosophy based on the "egalitarian premise that each individual should be allowed to develop the limits of his [or her] capabilities" (Medsker and Tillery, p. 14). These institutions--heralded as "the people's college"--epitomize the American aspiration that "education--and as much of it as can be obtained--shall be open to all citizens. . ." (Garrison, p. 6). The egalitarian nature of occupational education is reflected in low-tuition programs which adhere to open admission (the "open-door policy"), respond to community needs, and thus are committed to serve a wide variety of students who have diverse needs. Riendeau has described why the actualization of such a philosophy is a relatively new development in the American system of education:

> . . . the educational institutions receiving the most Brownie points have traditionally been those with the best admissions systems--"by selecting the best, they turn out the best." So while the American educational system stoutly claims to endorse the philosophy of "education for all," it has had a built-in, selecting-out mechanism. (p. 40)

In their refusal to perpetuate the "built-in selecting-out mechanism," community colleges are faced with the complex task of implementing programs for "persons of all ages who will come for varying lengths of time, to achieve a variety of educational goals, and at intervals throughout their lives" (Kerr, p. 10). With regard to the role of two-year post-secondary institutions, Glenn has written that:

> These institutions have taken on a difficult assignment of serving the needs of any person over sixteen who wants to learn. They are basically teaching institutions and represent: opportunity to individuals in the lower economic percentile who want to better their income and live more comfortably in society; a place where individuals can develop employment skills, upgrade their current employment skills, or retrain for new and emerging occupations; and a way for individuals to pursue vocational interests, whether it be as a hobby, for part-time employment or to keep self-activated and interested during retirement years. (p. 17)

The complexity of this "assignment" coupled with the rapid expansion of occupational education have resulted in a critical need for staff development programs designed specifically for occupational teachers.

A STAFF FOR THE MISSION

Few staff members have been oriented to the community college through attendance as students in such institutions or through enrollment in a graduate course about such institutions. Staff members are recruited from a wide range of sources, including the public school system, business, industry and four-year institutions, and characteristically are unprepared for employment as teachers in the community college. Even many of the preservice programs designed for the preparation of community college teachers have been inadequate (O'Banion, 1974, p. 28).

Hammons and Wallace maintain that "community colleges have never had staffs trained specifically to meet the special problems of their students" (p. 1). This fact is attributed to the necessity of hiring "partially prepared professionals" during the 1960s and the "then prevalent shortage of teaching professionals" (Hammons and Wallace, p. 1). The period of rapid growth in the 1960s also meant that the priority of two-year institutions was given to acquiring facilities and developing programs. However, since that period it has been recognized that the quality of education depends to a great extent on the quality of staff. "The priority of the future is a priority on persons, on the needs of the people who staff the people's college" (O'Banion, 1974, p. 25).

NEEDS IN PERSONNEL DEVELOPMENT

An Understanding of the Mission

With respect to identifying topics for inclusion in personnel development programs, ". . .the question of what to include, or what needs improving, is best answered by asking those for whom the program is intended--the faculty" (Hammons, p. 165). The following needs related to the unique role of the community college have frequently appeared in faculty surveys:

- .Knowledge of the multi-purposes of the community college, specifically: transfer education, adult and continuing education, general education, remedial and developmental programs, vocational-technical education
- .Knowledge of the characteristics and needs of community college students
- .Purposes (and implications) of the open-door admissions policy (Hammons, pp. 165-166)

These same needs are reflected as "priority needs" throughout the literature on staff development in two-year institutions. In An Assessment of Community College Staff Development Needs, Hammons and Wallace conclude that significant "lack of faculty understanding of the community college's unique role" (p. 41) may be a deterrent in the institution's ability to fulfill that role.

An Understanding of the Clientele

"Staff understanding of the clientele served" is another

need cited in the assessment by Hammons and Wallace (p. 35). Implicit in the need for an understanding of the clientele served is the need for an understanding of "nontraditional students," including "black students, older students returning to school, women, international students, people lacking basic literacy and/or computational skills, physically limited or handicapped students, or anyone who does not feel comfortable with the typical (traditional) classroom experience" (Goodman, p. 267). Many of these nontraditional students are also referred to as "new clientele." For example, Park identifies the "new clientele" as "the unemployed, the developmentally disabled. senior citizens, women, full-time employed, parolees, and the underemployed" (p. 29).

Ethnic Minorities

Teachers who operate from a White middle class value system must alter their "value systems and perceptual worlds" in order to address the needs of ethnic minorities (Bernier and Davis, p. 269). On the subject of Black enrollees in vocational education, Moody and Sheppard emphasize the importance of the teacher's sensitivity to "what is special about their [Blacks'] backgrounds, values, cultural patterns, immediate environment and specific influences presently impinging on them" (p. 119). The same sensitivity is required with regard to Native American (Indian) and Spanish-speaking students. Invariably, the burden is placed on Native Americans to understand White middle class values. As a result

of strong cultural influences, most Indian students "have not been able to fully comprehend their relationship to education, and education to the world of work" (Azure, 1974, p. 110). Consequently, Indian students need special help in understanding themselves in relation to education and subsequently, to occupational opportunities. In a discussion of vocational education and Mexican-Americans, Valdez writes of the cruelty of the American educational system: "Little does it matter that he is slow in learning due to his thinking process which conceptualizes in Spanish, translates into English, and then reacts. Educators label him a slow learner without regard for the cause or any consideration for a remedy" (p. 160). In order to diminish such insensitivity and to effectively respond to the culturally and linguistically-different student, teachers must forego their ethnocentric orientation in favor of one which fosters an appreciation of linguistic and cultural differences.

The Physically Handicapped

A growing number of community colleges are providing occupational education for the physically handicapped. With regard to physically handicapped students "vocational education takes on an even more important meaning" (Shworles, p. 137) for disabled persons than for those who are not disabled. For the handicapped, work signifies the "road to normality." Shworles writes of the convincing evidence that community colleges can "effectively integrate handicapped students into vocational education programs" (p. 144).

Occupational teachers must be sensitive to the fact that the handicapped especially "need to be educated to their full capacity" (Shworles, p. 143) since many jobs are not open to people who are physically disabled. Thus, the handicapped person must "prove competence beyond a doubt in order to overcome stereotypes" (Shworles, p. 143).

Women

Among the new clientele are an increasing number of women students who have particular needs. Like those students who are physically handicapped and those who are "linguistically and culturally different," women, too, must contend with stereotypes. In a society which practices "occupation according to sex," women face numerous obstacles in occupational education. If occupational instructors are to understand the special needs of women, they must first understand that these needs "are based on the inadequacy of the current, often implicit, assumptions about women and employment" (Kievit, p. 83). In "Women's Expanding Roles: Implications for Vocational Education," Kievit reports that women need:

- to be spared from the material and behavior based on sex-stereotyping
- to be assisted in analyzing their aptitudes, interests, and abilities as these relate to selection and preparation for jobs or careers
- to be helped in redefining "the more significant role which employment is to have in their lives"

> .to have access to information about occupational training programs and employment opportunities (p. 83)

Sensitizing occupational instructors to the needs of women--especially those women enrolled in nontraditional programs--should be given high priority in staff development programs (Eliason, p. 21). Teachers who have been conditioned to think in terms of "men's jobs" and "women's jobs" "require help in restructuring their perceptions" (Kievit, p. 83). In addition to sensitizing teachers to the needs of women, staff development programs can function significantly to provide an opportunity for teachers to thoroughly examine their perceptions, values, and behaviors, particularly thos which perpetuate sexism and racism. McClelland and Bushnell emphasize the critical importance of values clarification in the present time of "value crisis" and state that "the affective domain cannot be ignored" in staff development programs (p. 17).

Part-Time Students

Through a recently completed study of California community colleges, it was found that part-time students now comprise more than two-thirds of the enrollment. Approximately 50 percent of these students are at least 21 years of age. In their discussion of occupational education for older students, McClelland and Bushnell note that adults who are in the 25 to 30-year age bracket are experiencing increased competition in the labor market (p. 11). As a result, many

of these individuals--who already have college degrees--are returning to school for para-professional occupational training (McClelland and Bushnell, p. 11). In addition to an increase in the number of "returning students," a marked enrollment increase is occurring with respect to persons who are entering college for the first time at the age of 40 or 60 or older (Knoell, p. 23). For these part-time students who already have an extensive employment history, traditional curricula and instructional practices are inappropriate. Gillie cites "a heavy reliance upon traditional. . .instructio" as a weakness which requires attention in staff development programs (1971, p. 87). The influx of nontraditional students has drawn attention to the need for nontraditional instructional approaches. ". . .the demands of new clienteles require new staff competencies, particularly in instruction" (Hammons and Wallace, p. 1).

Increased Competence in Instruction

According to McCabe and Smith, "The commitment [of community colleges]. . .clearly seems to be to provide services to an increasingly disparate population in an increasingly personalized way" (p. 12). The importance of individualized instruction for nontraditional students is emphasized by Shill in his discussion of personnel development programs for teachers of nontraditional students. Such programs "will stress the importance of establishing guidelines for setting up individual programs of study" (p. 322). Teachers need expertise in developing "well-defined sequences of objectives which progressively

build upon student achievement" and in using a "wide variety of materials and procedures" to assist students in fulfilling their objectives (Ghill, p. 322).

Community college personnel reflected a concern for individualized instruction in their responses to the survey by Hammons and Wallace. Sixty-seven percent of the respondents expressed a need for training in the development and use of individualized materials. The need for faculty training in "motivating students in individualized instruction" was noted by 72 percent of the survey respondents. As a result of their survey, Hammons and Wallace have concluded that individualized instruction is one of the major problem areas for instructors in two-year colleges. (p. 15)

Although the concern for faculty expertise in individualized instruction--as well as other forms of nontraditional instruction--often stems from a concern for nontraditional students, Park has declared that "the development of alternative systems goes beyond merely meeting the needs of nontraditional students" (p. 29). He maintains that alternative instructional systems should be tailored to the student's learning style. Television instruction, newspaper courses, individualized programmed learning, or "graveyard shift" courses are among the alternatives cited by Park. With the development of new instructional technologies and other nontraditional approaches to learning, it is "imperative that all staff have opportunities to learn about and to adapt these innovations to their particular institutions" (O'Banion, 1974, p. 33).

In addition to the need for staff development in the use of instructional innovations, a variety of needs exist with regard to other instructional skills. In the Hammons and Wallace survey, 66 percent of the respondents expressed a need for training in the formulation of behavioral objectives. Slightly over half of the respondents (53 percent) designated "the development of proper test items" as a staff development need (p. 15). Sixty-eight percent of the survey participants cited "expertise in selecting, developing, and utilizing multi-media instructional materials" as an inservice training need (p. 15). In a discussion of instructional technology, McClelland and Bushnell point out that staff development programs must "not only feature mastery of the equipment but, more importantly. . .train teachers to make full use of it in the instructional process" (p. 16). Instructors must develop the skills required to state their learning objectives and then match suitable training methods and media to the objectives (p. 16).

Post-secondary occupational teachers have also expressed a need for improved competence in developing better course outlines, increasing student motivation, utilizing group process skills in class discussion, and evaluating instructional strategies (Hammons, p. 166). Conclusively, a need exists for the further development of <u>teaching skills</u>. Enhancement of these skills will enable occupational instructors to more effectively convey their <u>technical knowledge</u> and expertise to students.

CONCLUSION

According to a review of the literature, occupational instructors have a wide variety of needs with regard to personnel development. Those needs which call for particular attention in personnel development programs include:

- The Need for An Understanding of the Unique Role of the Community College, specifically
  - (1) a knowledge of the multi-purposes of the community college--transfer education, adult and continuing education, general education, remedial and developmental programs, vocational-technical education, and
  - (2) a knowledge of the characteristics and needs of community college students
  - (3) an understanding of the purposes and implications of the open-door admissions policy
- The Need for An Understanding of Nontraditional Students, including
  - (1) ethnic minorities
  - (2) physically handicapped
  - (3) women
  - (4) older students
  - (5) part-time students
- The Need for Increased Competence in Instruction, specifically in regard to
  - (1) designing and implementing individualized instruction
  - (2) formulating behaviorial objectives
  - (3) developing test items

(4) selecting and using multi-media instructional materials

(5) developing course outlines

(6) increasing student motivation

(7) utilizing group process skills in class discussion

(8) evaluating instructional strategies

Selected Bibliography

Azure, P. E. "Native American Staff: A Prerequisite to Successful Indian Education." In New Staff for New Students, pp. 106-116. Edited by Roger Yarrington. Washington, D. C.: American Association of Community and Junior Colleges, 1974.

Bernier, Normand R., and Davis, Richard H. "Synergy: A Model for Implementing Multicultural Education," Journal of Teacher Education, Vol. 24, No. 4 (Winter 1973): 269 cited by Richard H. Hersh, "PBTE and Multi-Cultural Education: If the Shoe Does Not Fit Should We Wear It," p. 34 in Sifting and Winnowing: An Exploration of the Relationship Between Multi-Cultural Education and CBTE, edited by Carl A. Grant. Madison: Teacher Corps Associates, University of Wisconsin, 1975.

Burkett, Lowell A. "Coordination of Secondary and Post-secondary Vocational Programs." In The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education, pp. 55-69. Edited by Angelo C. Gillie. University Park: The Center for the Study of Higher Education, Pennsylvania State University, 1974.

Eliason, Carol. Women in Community and Junior Colleges. Report of a Study on Access to Occupational Education. Washington, D. C.: American Association of Community and Junior Colleges, 1977.

Gaff, Jerry G. Toward Faculty Renewal. San Francisco: Jossey-Bass, 1975. Cited by Eric Beamish, et. al. in An Assessment of Needs for Professional Personnel for Occupational Education in New York State: Postsecondary, p. 257. Ithaca: Institute for Research and Development in Occupational Education, Cornell University, 1977.

Garrison, Roger H. Teaching in a Junior College. Washington, D.C.: American Association of Community and Junior Colleges, 1968.

Gillie, Angelo C., ed. The Second Annual Pennsylvania Conference on Post-Secondary Occupational Education. University Park: The Center for the Study of Higher Education, Pennsylvania State University, 1971.

_____. Principles of Post-Secondary Vocational Education. Columbus: Charles E. Merrill, 1973.

_____, ed. The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education. University Park: The Center for the Study of Higher Education.

_____, ed. The Seventh Annual Pennsylvania Conference on Postsecondary Occupational Education: Articulation in Vocational Education. University Park: The Center for the Study of Higher Education, Pennsylvania State University, 1976.

Glenn, John W., Jr. "The Role of Faculty Development in Two-Year Post-Secondary Institutions." In Post-Secondary Personnel Development, Volume I, pp. 17-34. Edited by Charles R. Doty and Ronald Gepner. Proceedings of the National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less than Baccalaureate Degree. January 18-21, 1976. St. Louis, Missouri.

Goodman, Alberta. "Assisting Nontraditional Students at Miami-Dade Community College." In Post-Secondary Personnel Development, Volume I, pp. 158-193. Edited by Charles R. Doty and Ronald Gepner. Proceedings of the National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less than Baccalaureate Degree. January 18-21, 1976. St. Louis, Missouri.

Hammons, James O. "Faculty Development in the Community College." In Post-Secondary Personnel Development, Volume I, pp. 158-193. Edited by Charles R. Doty and Ronald Gepner. Proceedings of the National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less than Baccalaureate Degree. January 18-21, 1976. St. Louis, Missouri.

Hammons, James O., and Wallace, Terry H. Smith. An Assessment of Community College Staff Development Needs in the Northeastern United States. Center for the Study of Higher Education, The Pennsylvania State University, University Park, Pennsylvania, May 1976.

Harris, Norman C., and Grede, John F. Career Education in Colleges. San Francisco: Jossey-Bass, Inc., 1977.

Kerr, Clark. "Fates and Fortunes of the Community College." Community and Junior College Journal, Volume 46 (August/September, 1975), pp. 6-10.

Kievit, Mary Bach. "Women's Expanding Roles: Implications for Vocational Education." In Vocational Education for Special Groups, pp. 63-85. Edited by James E. Wall. Washington, D. C.: American Vocational Association, 1976.

Knoell, Dorothy M. "Challenging the 'Model and the Myth'." Community and Junior College Journal, Volume 47 (November, 1976).

McCabe, Robert, and Smith, Cynthia M. "New Programs and Practices and Desirable Faculty Competencies and Attitudes." In Graduate Education and Community Colleges: Cooperative Approaches to Community College Staff Development. Edited by S. V. Martorana, et. al. Washington, D. C.: National Board on Graduate Education, 1975.

McClelland, William A., and Bushnell, David S. "A Futuristic Look at Training." In New Staff for New Students, pp. 10-22. Edited by Roger Yarrington. Washington, D. C.: American Association of Community and Junior Colleges, 1974.

Medsker, Leland L., and Tillery, Dale. Breaking the Access Barriers. New York: McGraw Hill, 1971.

Meeds, Lloyd. Presentation to Governmental Affairs Luncheon, American Association of Community and Junior Colleges, 55th Annual Convention, Seattle, Washington, April 14, 1975. Cited by Thomas R. Shworles, "Handicapped Citizens: Increasing The Opportunities Through Vocational Education," p. 143 in Vocational Education for Special Groups, edited by James E. Wall. Washington, D. C.: The American Vocational Association, 1976.

Monroe, Charles R. Profile of the Community College. San Francisco: Jossey-Bass, Inc., 1972.

Moody, Ferman B., and Sheppard, N. Allan. "The Status of Blacks in Vocational Education: Reflections and Perspectives." In Vocational Education for Special Groups, pp. 107-124. Edited by James E. Wall. Washington, D. C.: American Vocational Association, 1976.

O'Banion, Terry. Teachers for Tomorrow. Tuscon: The University of Arizona Press.

_____. "Staff Development: A Priority on Persons." In New Staff for New Students, pp. 23-40. Edited by Roger Yarrington. Washington, D. C.: American Association of Community and Junior Colleges, 1974.

Park, Young. "A Conceptual Basis for Nontraditional Study." Community and Junior College Journal, Volume 46 (March, 1976), pp. 29-31, 76.

Riendeau, Albert J. "New Trends in Community College Vocational Education." In Occupational Education in the Junior College, pp. 38-43. Washington, D. C.: The American Association of Junior Colleges, 1969.

Shill, James F. "Developing Vocational Education Personnel To Meet the Needs of Persons in Special Groups." In Vocational Education for Special Groups, pp. 311-327. Edited by James E. Wall. Washington, D. C.: American Vocational Association, 1976.

Shworles, Thomas R. "Handicapped Citizens: Increasing the Opportunities Through Vocational Education." In Vocational Education for Special Groups. pp. 136-150. Edited by James E. Wall. Washington, D. C.: American Vocational Association, 1976.

Strong, Merle E., and Schaefer, Carl J. Introduction to Trade, Industrial, and Technical Education. Columbus: Charles E. Merrill, 1975.

Valdez, Delfino. "Social Mobility for Mexican-American Via Vocational Education." In Vocational Education for Special Groups, pp. 151-163. Edited by James E. Wall. Washington, D. C.: American Vocational Association, 1976.

APPENDIX B

Annotated Bibliography of Resources for Competency-Based Staff Development Programs

ANNOTATED BIBLIOGRAPHY OF RESOURCES FOR COMPETENCY-BASED STAFF DEVELOPMENT PROGRAMS

By

Orest Cap
Graduate Research Associate

The National Center for Research in Vocational Education
The Ohio State University
1960 Kenny Road
Columbus, Ohio 43210

INTRODUCTION

This annotated bibliography of resources provides, in abstract form, materials which could be useful to post-secondary staff development personnel as they plan, prepare, and implement a competency-based staff development program. The bibliography is further seen as an aid for post-secondary vocational teachers in understanding competency-based education (CBE), and in locating related materials.

Abstracts contained in this section have been organized into the following four sections:

1. Competency-Based Staff Development: Instructional Materials,
2. Meeting the Needs of Special Groups: General References,
3. Competency-Based Education: Instructional Materials,
4. General References.

An alphabetical listing of all referenced publishers and their addresses is provided at the end of this section.

Process for Obtaining Documents

The information on the resources for competency-based staff development programs described herein was obtained from several sources. Documents were selected from a computer search of Abstracts in Instructional Materials/Abstracts in Research Materials (AIM/ARM) and Educational Resources Information Center (ERIC). The search was further extended to include dissertations, periodicals, magazines, and special publications from the holdings of the Research Library at The National Center for Research in

Vocational Education. The project's advisory committee assisted in the identification of further leads for resource documents. Additional materials were acquired through personal communications with individuals, agencies, and commercial publishing firms as well as the personal libraries of project staff.

We would like to recognize Robert E. Norton, Glen E. Fardig, and Joan Simon Jones for allowing us to reproduce, in part or in full, abstracts taken from An Annotated Bibliography of Competency-Based Vocational Instruction-Preliminary Version (Fardig and Jones, 1977*), Competency-Based Administrator Education Programs and Materials (Norton, 1977**), and Vocational Education Teacher Education Curriculum - A Bibliography of Documents from ERIC and AIM/ARM (Fardig, 1977***). The asterisks after each abstract title indicate the author from whom the abstract was obtained.

Systems for Selecting and Reviewing the Abstracts

Items were selected for inclusion in the bibliography if they are of fairly recent publication, are considered to be generally useful to staff development personnel, and are currently available to the profession.

The materials described in this section were developed by a number of different agencies or institutions, e.g. universities, research and development centers, and state departments. Consequently, the overall quality, format, assessment procedures, and objectives outlined in the materials vary widely. It is anticipated that some of these materials may be useful to staff

development personnel as they design and implement new programs or upgrade and enhance existing ones. It is therfore recommended that the individual needs of teachers in the competency-based staff development program be given serious consideration as modules and materials are being selected. The materials abstracted in this section are those considered most appropriate by the reviewers and reflect only a select segment of the materials which are available to post-secondary staff.

Explanation of Abstracts

Each abstract contains as much information as possible. Wherever possible, ED and VT numbers are provided. In some instances the publishing date and prices were not available.

Competency-Based Staff Development: Instructional Materials

Brooks, K. et al. Industry Services Leadership Development Modules. Mississippi State, MS: Mississippi Research and Curriculum Unit for Vocational-Technical Education, College of Education, Mississippi State University, 1976. Price: $50.00 per set only to out-of-state groups; Free to interested persons or groups in Mississippi.

This series of 33 self-paced instructional modules are designed to train state and local leaders for roles in industrial training. Each module contains industrial training information, self-test, practice learning activities, and a list of institutions for performing the industrial teaching task(s) in an actual work situation. The materials are intended for use by personnel in any organization which has a training function. The modules are designed for use by individuals, small groups, and/or large groups. The modules are grouped into 13 categories: (1)Orientation to Industry Services, (2)Establishing Contacts and Relationships, (3)Obtaining Agreements, (4)Identifying Training Needs, (5)Acquiring Resources, (6)Training Instructors for Industry Services, (7)Preparing for Training, (8)Preparing Training Materials, (9)Selecting Candidates, (10)Monitoring Training Programs, (11)Closing Training Programs, (12)Placing Program Participants, and (13)Evaluating Industry Services Programs.

Career Education Center, The Florida State University, Florida's Approach to Competency-Based Individualized Training (FACIT). Tallahassee, FL: State of Florida, Department of Education, 1977.

This is a series of individualized learning packages (modules) for the preservice and inservice training of vocational teachers who are to implement individualized, competency-based programs. They are basically self-contained and self-instructional. There are six instructional components: Goal Setting (2 competencies); Objectives (4); Criterion Referenced Testing (6); Learning Experiences (11); Evaluation (3); Instructional Management (6).

Support materials include optional media for the instructional components, a filmstrip overview of the FACIT system, participant's guide, and facilitator's guide. Suitable for classroom or workshop use, the components require approximately 26 hours for the learner to complete.

Carney, Thomas. Post-Secondary Teacher Training Module. Austin, TX: Division of Occupational Research and Development, Department of Occupational and Technical Education, Texas Education Agency, n.d.

This series of 11 modules is directed toward the post-secondary occupational education instructor. Each module may be utilized according to its sub-units or as a whole for inservice teacher training and traditional credit courses. The following competencies attained individually as the need dictates: curriculum development, instructional strategies, instructional tactics, test construction, evaluation, student-teacher relationships, professionalism, public relations, program management, health occupations education, and team teaching. A number of diagrams, selected bibliographies, forms and other relevant information can be found in each module.

The Center for Vocational Education. Program Planning, Development and Evaluation--Category A. Athens, GA: American Association for Vocational Instructional Materials, 1978. Price range for modules in this category: $2.10-$4.80.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

.Prepare for a Community Survey
.Conduct a Community Survey
.Report the Findings of a Community Survey
.Organize an Occupational Advisory Committee
.Maintain an Occupational Advisory Committee
.Develop Program Goals and Objectives
.Conduct an Occupational Analysis
.Develop a Course of Study
.Develop Long-Range Program Plans
.Conduct a Student Follow-up Study
.Evaluate Your Vocational Program.

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Instructional Planning--Category B. Athens, GA: American Association for Vocational Instructional Materials, 1977. Price range for modules in this category: $2.00-$3.50.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules.

The following modules are contained in this category:

.Determine Needs and Interests of Students
.Write Student Performance Objectives
.Develop a Unit of Instruction
.Develop a Lesson Plan
.Select Student Instructional Materials
.Prepare Teacher-Made Instructional Materials

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activites and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Instructional Execution--Category C. Athens, GA: American Association for Vocational Instructional Materials, 1977. Price range for modules in this category: $1.50-$4.20.

.Direct Field Trips
.Conduct Group Discussions, Panel Discussions, and Symposiums
.Employ Brainstorming, Buzz Group, and Question Box Techniques
.Direct Students in Instructing Other Students
.Employ Simulation Techniques
.Guide Student Study
.Direct Student Laboratory Experience
.Direct Students in Applying Problem-Solving Techniques
.Employ the Project Method
.Introduce a Lesson
.Summarize a Lesson
.Employ Oral Questioning Techniques
.Employ Reinforcement Techniques
.Provide Instruction for Slower and More Capable Learners
.Present an Illustrated Talk
.Demonstrate a Manipulative Skill
.Demonstrate a Concept of Principle
.Individualize Instruction
.Employ the Team Teaching Approach
.Use Subject Matter Experts to Present Information
.Prepare Bulletin Boards and Exhibits
.Present Information with Models, Real Objects, and Flannel Boards
.Present Information with Overhead and Opaque Materials
.Present Information with Filmstrips and Slides
.Present Information with Films
.Present Information with Audio Recordings
.Present Information with Televised and Videotaped Materials
.Employ Programmed Instruction
.Present Information with the Chalkboard and Flip Chart

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Instructional Evaluation--Category D. Athens, GA: American Association for Vocational Instructional Materials, 1978. Price range for modules in this category: $1.30-$3.20.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

.Establish Student Performance Criteria
.Assess Student Performance: Knowledge
.Assess Student Performance: Attitude
.Assess Student Performance: Skills
.Determine Your Instructional Effectiveness

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Instructional Management--Category E. Athens, GA: American Association for Vocational Instructional Materials, 1977. Price range for modules in this category: $1.70-$3.80.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

.Project Instructional Resource Needs
.Manage Your Budgeting and Reporting Responsibilities
.Arrange for Improvement of Your Vocational Facilities
.Maintain a Filing System
.Provide for Student Safety
.Provide for the First Aid Needs of Students
.Assist Students in Developing Self-Discipline
.Organize the Vocational Laboratory
.Manage the Vocational Laboratory

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Guidance--Category F. Athens, GA: American Association for Vocational Instructional Materials, 1977. Price range for modules in this category: $2.00-$2.70.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

- .Gather Student Data Using Formal Data-Collection Techniques
- .Gather Student Data Through Personal Contacts
- .Use Conferences to Help Meet Student Needs
- .Provide Information on Educational and Career Opportunities
- .Assist Students in Applying for Employment or Further Education

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. School-Community Relations--Category G. Athens, GA: American Association for Vocational Instructional Materials, 1978. Price range for modules in this category: $1.50-$2.50.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

- .Develop a School-Community Relations Plan for for Your Vocational Program
- .Give Presentations to Promote Your Vocational Program
- .Develop Brochures to Promote Your Vocational Program
- .Prepare Displays to Promote Your Vocational Program
- .Prepare News Releases and Articles Concerning Your Vocational Program
- .Arrange for Television and Radio Presentations Concerning Your Vocational Program
- .Conduct an Open House
- .Work with Members of the Community
- .Work with State and Local Educators
- .Obtain Feedback about Your Vocational Program

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activiities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Student Vocational Organization--Category H. Athens, GA: American Association for Vocational Instructional Materials, 1977. Price range for modules in this category: $1.30-$1.80.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules.

The following modules are contained in this category:

- .Develop a Personal Philosophy Concerning Student Vocational Organizations
- .Establish a Student Vocational Organization
- .Prepare Student Vocational Organization Members for Leadership Roles
- .Assist Student Vocational Organization Members in Developing and Financing a Yearly Program of Activities
- .Supervise Activities of the Student Vocational Organization
- .Guide Participation in Student Vocational Organization Contests

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Professional Role and Development--Category I. Athens, GA: American Association for Vocational Instructional Materials, 1978. Price range for modules in this category: $1.30-$3.10.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

- .Keep Up-To-Date Professionally
- .Serve Your Teaching Profession
- .Develop an Active Personal Philosophy of Education
- .Serve the School and Community
- .Obtain a Suitable Teaching Position
- .Provide Laboratory Experiences for Prospective Teachers
- .Plan the Student Teaching Experience
- .Supervise Student Teachers

Each module is an instructional package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

The Center for Vocational Education. Coordination of Cooperative Education--Category J. Athens, GA: American Association for Vocational Instructional Materials, 1978. Price range for modules in this category: $1.30-$4.00.

This set of modules represents one of the ten categories of professional competencies covered by The Center's 100 performance-based teacher education modules. The following modules are contained in this category:

.Establish Guidelines for Your Cooperative Vocational Program
.Manage the Attendance, Transfers, and Terminations of Co-Op Students
.Enroll Students in Your Co-Op Program
.Secure Training Stations for Your Co-Op Program
.Place Co-Op Students on the Job
.Develop the Training Ability of On-The-Job Instructors
.Coordinate On-The-Job Instruction
.Evaluate Co-Op Student's On-The-Job Performance
.Prepare for Students' Related Instruction
.Supervise an Employer-Employee Appreciation Event

Each module is an instructonal package designed to cover one or more closely related teaching competencies. The package includes information activities and feedback devices to help the learner acquire each competency.

** Colorado State University. Professional Development for Vocational Administrators. Fort Collins, CO: Department of Vocational Education, Colorado State University, 1977.

To date seven modules have been developed and tentative plans call for developing six more. The materials are to be turned over to the State Department for dissemination. The seven titles now in process include:

1. Elements of Motivation
2. Human Relations
3. Classroom Observation and Supervision
4. Curriculum Management--A Systems Approach
5. Communication Systems and Techniques
6. Professional Staff Management and Development
7. Leadership Styles and Development

Each module also has a videotape and slide/tape package which supplements it.

Cook, Fred S. et al. A Working Model of a Competency-Based Teacher Education System. Detroit, MI: Wayne State University, Department of Vocational and Applied Arts, 1973. ED 077 870.

The program described here utilizes a series of teacher training modules called Wayne Kits. They are designed to deliver on 50 essential teacher competencies, with each competency containing a number of objectives. A systems approach is used to design the curricula. The Kits contain a variety of learning experiences and are appropriate for the preparation of vocational teachers in all service areas.

Related descriptive documents are ED 076 747, and ED 076 746.

Department of Education, State of Florida. B-2 Teacher Training Modules. Chipley, FL: Panhandle Area Educational Cooperative, 1970.

This is a series of 52 teacher-education modules developed for general teacher education. They are organized into eight clusters: Teacher Aide Training, Planning Skills for Teachers, Presentation Skills for Teachers, Classroom Procedures, Questioning Skills, Assessment, Special Skills, and Assessing Educational Personnel. There are a number of required and optional materials related to the instructional modules. Most of the modules should be suitable for vocational teacher training.

Fardig, G.E., Robert E. Norton, and James B. Hamilton. Guide to the Implementation of Performance-Based Teacher Education. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1976. 114 pp.

This guide presents the major conerns of all those responsible for evaluating, installing, and maintaining a performance based teacher education program. The topics covered in this guide include: an awareness program for PBTE, planning for change to PBTE, PBTE program patterns, selection of teacher competencies for PBTE programs, development of instructional materials, financial support for PBTE, and personnel development for PBTE. This guide will be useful to individuals who are interested in installing PBTE.

** Finch, Curtis R. et al. Competency-Based Administrator Education Materials. Blacksburg, VA: Virginia Polytechnic Institute and State University, Division of Vocational and Technical Education, 1977.

While this series of six modules is meant to be used for vocational administrator education, it may be of equal value as a basis for a graduate program for supervisors. The self-contained modules include information sheets, self-evaluation activities, simulation activities, and final competency assessment forms. A user's guide is available. The titles of the modules are:

Motivating Vocational Education Personnel to Their Optimum Growth Potential
Implementing Competency-Based Instruction in Vocational Education
Planning Vocational Education Programs for the Disadvantaged and Handicapped
Formulating Goals and Objectives for Vocational Education Programs

Organizing and Conducting Staff Development Activities for Vocational Teachers
Preparing Local Plans for Administering Vocational Education

Harrington, T.C., Barbara F. Johnson et al. Delivering Competency-Based Vocational Education: A Teacher's Guide to Indvidiualizing Instruction. Tallahasee, FL: Florida State University, 1976. 233 pp.

This guide is designed for the use of teachers who are individualizing their instruction. It offers the vocational instructor a broad array of strategies and techniques for individualizing instruction within the context of competency-based vocational education programs. The guide is divided into four content sections. Section I: Setting and Sequencing Individual Vocational Goals; Section II: Utilizing, Performance Objectives and Criterion-Referenced Tests to Individualize Instruction; Section III: Using Instructional Strategies to Individualize Learning Experiences; and Section IV: Evaluating and Managing Individualized Instruction. The guide contains appendices for each section and a glossary of terms which may be found at the end of the manual.

The Heart of Instruction Series. Columbus, OH: State Department of Education, Division of Vocational Education, 1977.

This series of 13 booklets is written for teacher educators and preservice students in order to provide them with an opportunity for sharing specific practical resources to improve their instructional processes. This series of booklets is directed toward inservice training and is not competency-based. Some of the areas covered are: (1) It Starts With the Teacher (2) Psychology of Learning (3) Selection and Use of Instructional Resources (4) Selection and Use of Teaching Strategies (5) Effective Lesson Plans and Assignments (6) Evaluation of Learning, and (7) Classroom and Lab Management. Each booklet is organized into three parts: Overview, Practical Resources, and Possible Performance Activities.

Individualized Competency-Based Common Core Curriculum of Vocational Education. Fresno, CA: California State University, 1976.

This modular curriculum is intended for use in the preparation of vocational educators in all service areas. The 29 modules in the series are organized into seven categories:

I Introduction to Vocational Education
II Cooperative Relations
III Vocational Students
IV Administration of Vocational Education
V Curriculum Design for Vocational Education
VI Stages and Structure in Curriculum Development
VII Evaluation and Research

Loepp, F. et al. Pre-Service Occupational Program (POP). East Central Curriculum Management Center, Illinois Office of Education, Adult, Vocational and Technical Education, 1973.

The 38 booklets are primarily self-contained, well illustrated packages designed for use in a multitude of instructional arrangements and under the direction of a professional educator. These booklets are intended for preservice vocational teachers. Major titles listed are: (1) The Project, (2) Program Planning, (3) Guidance Activities, (4) Instructional Planning, (5) Evaluation of Instruction, (6) Coordination, (7) Youth Organization, (8) Operational Activities, (9) Public Relations, (10) Professional Role, and (11) Program Evaluation. Each learning activity package is structured in the following manner: rationale performance objectives, pre-assessment, learning activities and evaluation for competence.

*** Minnesota University. Providing Special Teacher Education Services to Selected Vocational Programs in Minnesota. St. Paul, MN: Minnesota State Department of Education, Division of Vocational and Technical Education, 1975. 227 pp. ED 124804 Price MF-$0.83, HC-$12.71.

The purpose of this project was to develop and field test a model for delivering teaching competency instruction to inexperienced vocational teachers. An off-campus course was developed utilizing six individualized learning packages or modules based on 38 competencies considered most important for beginning teachers. Results of the field test and evaluation of the course by students, resource persons, and project staff provide the basis for recommendations for future planning of similar delivery systems. Included in the document are a bibliography, instrument for establishing competency priorities, course resource materials, and, comprising 180 pages, the complete texts of the six modules: audiovisual equipment and materials, writing behaviorally-oriented objectives, overview of developing and planning a course, constructing a lesson plan, planning and executing an introduction and summary for a lesson, and selecting and executing the different teaching strategies. Each module contains an

introduction, performance objectives, references, equipment and materials needed, directions related to what and how to study, resource information about the topic, learning activities, test questions, self-evaluation checklist, and evaluation of the module. (Author/RG)

** Norton, Robert E. et al. Competency-Based Vocational Education Administrator Materials. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1977.

This is an initial series of six basically self-contained, competency-based instructional modules. They are designed for both preservice and inservice use by vocational administrators, and may be equally useful to supervisors of vocational programs. Each module includes performance objectives, information sheets, learning activities, and feedback devices. The titles of the modules are:

Organize and work with a Local Vocational Education Advisory Council
Supervise Vocational Education Personnel
Appraise the Personnel Development Needs of Vocational Teachers
Establish a Student Placement Service and Coordinate Follow-up Studies
Develop Local Plans for Vocational Education: Part I
Develop Local Plans for Vocational Education: Part II

Performance Based Vocational Teacher Training Modules. Miami, FL: Vocational Curriculum Materials Service, 1973-1974.

This series of modules provides an opportunity for beginning teachers to practice and familiarize themselves with a number of pedagogical skills. Each module contains the following sections: purpose, introduction, instructions, pre-assessment and an extensive appendix. Among the available performance-based modules are (1) instructional aids, (2) teaching methodology (effective teaching factors) (3) lab management and organization and (4) foundations of vocational education.

Peter, L.J. Competencies for Teaching: Teacher Education. Belmont, CA: Wadsworth Publishing Company, 1975. 135 pp.

This document is a manual of instructions for installing and operating a competency-based teacher education program. The author suggests that it can be used as a textbook for students in teacher education. This publication is divided into ten chapters, and includes the following topics: (1) competency-based teacher education, (2) the systems approach,

(3) implementation of the system, (4) teacher education in individual instruction, (5) directing an individual instruction program, and (6) directing a classroom instruction program. Appendices complete the document.

Vocational Education Curriculum Specialist Modules. Palo Alto, CA: American Institutes for Research, 1976. ED 132 376

This set of 23 comprehensive teaching/learning modules is designed to train vocational education curriculum specialists. The modules are intended for use in a variety of educational environments, including independent study, team teaching, seminars, conventional classroom setting, and workshops. Each module contains a core of similar sections: preface, acknowledgements, organization, and administration, content and study activities, group and classroom activities, student self-check, and appendices. "The Scope of Vocational Education" and "Roles of Vocational Educators" are included among the introductory modules. The remaining 15 modules include "Important Differences Among Learners," "Learning Processes and Outcomes," "Applying Knowledge of Learning Processes and Outcomes to Instruction," "Assessing Manpower Needs and Supply in Vocational Education," "Selecting Instructional Strategies for Vocational Education," and "Procedures for Conducting Evaluations of Vocational Education." An additional two modules contain seminar-field experiences and an installation guide. This document may be very helpful to a number of individuals--instructors, chairpersons, vocational supervisors, curriculum coordinators--interested in designing, developing, and evaluating a vocational program through modules.

Winter, M.G. et al. Reality-Based Evaluation for Two-Year College Occupational Programs. Ithaca, NY: Cornell University, New York State College of Agriculture and Life Sciences, 1976. 44 pp.

The reality-based evaluation guidebook was developed to assist post-secondary occupational educators in the conduct of local program evaluation efforts. It is a do-it-yourself approach to evaluation. A recommended design is presented, but the final scope and shape are subject to local choice. This publication is organized into six sections: (1) introduction and acknowledgements, (2) rational and model, (3) RBE Process with its three phases, (4) adapting the RBE process, (5) supplementary topics, and (6) design materials. A number of general references are included in this document and a reproducible master is provided for duplicating the basic outline of each evaluation outline form.

Meeting the Needs of Special Groups: General References

Avoiding Stereotypes: Principles and Application. New York, NY: Houghton Mifflin Company, 1975. 30 pp.

This document offers guidelines for eliminating racism and sexism in educational materials. It identifies racial and sex-role stereotypes which occur in relation to personal attributes, physical appearance, roles and activities, group configurations and language.

Bem, S.H. and D.J. Bem. Training the Woman to Know Her Place: The Social Antecedents of Women in the World of Work. PA: State Department of Education, 1974. 25 pp.

This paper gives a picture of women facing a variety of barriers in the world of work. The following major topics are discussed: women in the world of work, discrimination, sex-role conditioning, the presumed incompatibility of family and career, and preparing for the future. This publication may be useful to guidance counselors, educators, and school administrators who are interested in sex-role stereotyping.

Eliason, Carol. Women in Community and Junior Colleges. Washington, DC: American Association of Community and Junior Colleges, 1977. 64 pp. Price: $5.00.

This recently completed publication is a summary of the findings of The Center for Women's Opportunities (CWO) research effort. Through a survey, members identified the socioeconomic backgrounds of female students attending two-year institutions, their reasons for attendance, and impressions of their experiences. This document has been orgainzed into the following sections: (1) Center for Women's Opportunities survey, (2) institutional problems and prospects, (3) support programs and services, (4) federal legislation and funding sources, (5) the private two-year college, and (6) summary of findings. The appendix lists additional exemplary programs/services for women in two-year colleges, funding sources, instruments, responses received, and an extensive selected bibliography dealing with women's issues.

*** Hirshfeld, M. Updating the Process and Content of Teacher Education Curriculums to Reach Disadvantaged Youth in Metropolitan Areas, Volume IX, Final Report. Philadelphia, PA: Temple University, Division of Vocational Education, 1971. 266 pp. ED 056 201 Price: MF-$0.76, HC-$13.32.

Ninety-one professionals from 22 states participated in an institute designed to examine ways to effect behavioral changes in power structures and decision policy makers so that legislative mandates for total education and training programs for in-school and out-of-school youth will become a reality. Fourteen presentations aimed specifically at the needs of economically and culturally disadvantaged youth are abstracted in this report, including (1) "Working With Disadvantaged Youth--Vocational Competencies" by Charlotte Epstein, (2) Status Report on Research on Vocational Teacher Characteristics" by Edward Ferguson, (3) "Preparing Vocational Teachers for the Disadvantaged" by Ted Ward, (4) "Law Dimensions in Teacher Education" by Adelaide Jablonsky, (5) "Improving Teacher Education through the Utilization of Models" by Dale Hamreus, and (6) "Current Trends in Vocational Certification" by Richard Adamsky. An analysis of the data gathered through means of the various evaluations revealed that the institute was highly significant and met the stated objectives. However, it was noted that there was little change in attitudes and opinions of the participants as a result of the two-week institute. Also, it was recommended that there should be other institutes of this nature. (JS)

*** Kent State University. Identification of Professional Competencies Necessary for Teachers of Disadvantaged and Handicapped Youth. Supplemental Document. Columbus, OH: State Department of Vocational Education, 1975. 142 pp. VT 102 967

This report describes a project designed to identify the teaching competencies necessary for vocational teachers of Ohio's special needs students. Project activities and accomplishments are reported according to the three phases of the project. The first phase involved the identification of teacher competencies, and the information in this section pertains to the activities and responsibilities of project personnel and includes the final list of teacher competencies. The materials in the second section relate to the major activities of Phase II, which were the distribution of the competency survey and the reporting of the preliminary results. Cover letters, survey instruments, competency identification procedures, and the results of the survey presented in the form of frequency tables are contained in this section. The third phase was designed to report the project findings. Included within this section is information relative to the two-day teacher education conference and evaluation and statistical analyses of teacher and supervisor responses represented in tables according to the currently operating Ohio program areas of

occupational work experience, occupational work adjustment, and special needs program, project results, conclusions, and recommendations as presented to the conference participants are also included. (NJ)

National Education Association. Non-Sexist Education: Women's Rights and The Law. NEA Series on Multi-Ethnic Education. Washington, DC: National Education Association, 1976. Price: Total $21.25 (includes four tape cassettes, $18.00) (Two booklets, $2.25 and $1.00).

This set of materials, drawing on the premise that the inequities in the social system are reflected in the educational process provides practical suggestions for bringing about equity in educational institutuions. It contains three units: What is Affirmative Action?, Non-Sexist Education for Survival, and Women's Rights: Multicultural Equity. The entire product (documents and four tape cassettes) requires a minimum of five hours of study.

National Education Association. Pluralism: NEA Series on Multi-Ethnic Education. Washington, DC: National Education Association, 1976. Price: Unit(1) $6.00, Unit(2) $4.00.

This product provides tools for understanding uniculturalism (racism/sexism) and exploring a multicultural approach to teaching and learning. The two units available are: (1) The Architecture of Pluralism, and (2) Beyond Uniculturalism. The material is appropriate for vocational teachers and is adaptable to personal needs and learning styles.

Phelps, L.A. et al. Vocational Education for Special Needs Students: Competencies and Models for Personnel Preparation. Final Report. Urbana, IL: Bureau of Educational Research, University of Illinois, 1976. 240 pp.

This report is the result of a workshop concerning the needs of special student populations. It has a three-fold purpose: (1) to describe and disseminate project results, (2) to identify professional tasks to be performed by personnel involved in the vocational programming of special needs students, and (3) to describe some special needs personnel preparation models. The report is divided into three major parts. Part I of the document describes workshop activities, presentations, pre-workshop planning, post-workshop follow-up activities, follow-up evaluation and dissemination. Part II focuses on a description and analysis of professional tasks for

special needs personnel. Part III presents ten models for preparing special needs personnel, list of participants and a bibliography. The appendix includes a number of forms, questionnaires, letters and lists of tables.

Reynolds, J. and M. Kelsey. Program for Persons of Unlimited English-Speaking Ability. Washington, DC: University Research Corporation, 1977. 111 pp.

This report looks at The Program for Persons of Limited English-Speaking Ability (PLESA). It reviews the concepts of the PLESA program and describes projects funded under it. The project summaries which make up the major portion of the report are indexed according to USOE regions.

Stakelon, A.E. and J.H. Magisos. Sex Stereotyping and Occupational Aspiration: An Annotated Bibliography. Bibliography Series Number 29. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1975. 43 pp. Price: $3.00.

This publication is a collection of abstracts concerning sex sterotyping and occupational aspiration. The document contains 122 abstracts which are organized in the following categories: ERIC Report Literature, AIM/ARM Report Literature, Journal Articles, and Projects in Progress. Researchers, curriculum and guidance specialists, and teachers who need up-to-date resources on this topic may find this publication to be of assistance.

Tittle, C.K. and E.R. Denker. "Re-Entry Women: A Selective Review of the Educational Process, Career Choice, and Interest Measurement." Review of Educational Research, Volume 47, Number 4, Fall, 1977. Pg. 531-584.

This review looks into several factors related to the re-entry of women into post-secondary education and draws implications for needed research. The first portion of the review discusses barriers and opportunities in post-secondary education for women. Barriers discussed include family resistance, financial problems, college restrictions, as well as attitudinal and self-concept characteristics. Opportunities are presented in a review of frequently proposed solutions such as counseling and special programs. Current theory and research on career choice for women, especially the "re-entry women," represent a basic factor which limits these solutions at present. The second part of this review presents major theories and findings of recent research studies. The third part deals specifically

with interest inventories and the issue of sex bias in interest measurement, along with a review of recent research in the area. The review concludes with implications for needed research--theoretical, programmatical and in the area of interest measurement.

U.S. Department of Labor. Women in Apprenticeship Why Not? Manpower Research Monograph No. 33. U.S. Government Printing Office, 1974. 34 pp.

The number of women in apprenticeship and the range of occupations for which women might apply and be accepted for apprenticeships in Wisconsin are examined and summarized in this monograph. The authors, in their study, have found barriers in the attitudes and procedures of a variety of agencies; they then tried to identify means to minimize them. Tables supported with data give the reader the essence of insights from the study. A variety of items are discussed in this document, including; (1) dispelling myths about women, (2) obstacles facing women, (3) manpower training programs, (4) labor standards and studies recommendations.

Wall, J.E., (ed.) Vocational Education for Special Groups, Sixth yearbook. Washington, DC: American Vocational Association, 1976. 350 pp. Price: $12.00.

Twenty-four selected authors explore pressing issues, concepts, and strategies concerning vocational education for special groups. The book is divided into three sections. Section I deals with vocational education and special groups: an overview. Section II focuses on specific special groups, while Section III examines strategies for delivering vocational education to special groups. This book is designed to assist individuals who are in the process of developing and/or conducting programs dealing with special groups. This publication may also be useful for individuals concerned with the improvement and expansion of vocational education opportunities for persons in special groups.

Competency-Based Education: Instructional Materials

* An Analysis of the Air Conditioning, Refrigerating and Heating Occupations. (Thomas L. Hindes, Project Director; William L. Ashley, Project Coordinator). Columbus, OH: The Ohio State University, Instructional Materials Laboratory, 1973-76.

"The analysis data provided a basis for generating materials, course outlines, student performance objectives, and criterion measures as well as identifying specific supporting skills and knowledge in the academic subject areas." (Foreword)

Each of the 75 booklets (approximately) was developed by occupational consultants with teacher verification. The booklets include: job description, resources, performance knowledge, decisions, cues (feedback), errors, subject matter related task statements, performance modes, and appendices listing duties in general occupational areas.

Further booklets under development describe: Organization of Performance Activities, Example Test Items, Criterion Referenced Objectives, and Materials Required. These serve as aids to teachers in preparation of performance test items.

* Colorado Individualized Instruction Consortium Project. Auto Mechanics, Welding, Air Conditioning/Refrigeration. Fort Collins, CO: Larimer County Vocational-Technical Center, n.d.

These are competency-based learning modules which include: purpose, rationale, objectives, learning activities, media, information sheets, and post-evaluations. Further programs under development include Advanced Welding, MIG and TIG Welding, Electronics, Radio/TV Repair, and Drafting.

* Cowan, E. Welding. Stillwater, OK: Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1974. ED 112 002.

This curriculum guide for welding instruction contains sixteen units or modules divided into six sections: Introduction, Related Information, Blueprints, Oxyacetylene Welding, Arc Welding, and Gas Arc Welding. Modules are formatted as follows: terminal objectives, specific objectives, suggested activities, instructional materials, information sheet, transparency masters, assignment sheet, test, and test answers.

Day, Gerald F. A Resource Guide for the Maryland Plan's Group Project and Line Production. College Park, MD: The Center for Research and Instructional Materials, Industrial Education Department, 1974-77. VT 102 114.

The series provides information designed to aid classroom teacher in implementing a competency-based program. Each guide contains occupational information, instructions for developing a competency-based program, and annotated lists of instructional materials and resources. The guides address the following instructional areas: carpentry; graphic arts; electricity; electronics; auto mechanics; auto body and fender; machine shop; drafting; masonry; welding; and cosmetology. A series of Learning Activity Packages (LAP's) is being developed and will be available during the school year 1977-78.

*** Dallas County Community College. The Development of Behavioral Objectives and Instructional Units in Selected Occupational/Technical Courses: A Pilot Project. Austin, TX: Texas Education Agency, Division of Occupational Research and Development, 1973. 51 pp. VT 020 843. Price: MF-$0.76, HC-$3.32.

A pilot project was initiated in the Dallas County (Texas) Community College District to: (1) introduce the instructional staff to the use of behavioral objectives, (2) provide for the development of instructional capabilities in writing behavioral objectives and in building instructional materials, and (3) assure that the results of the behavioral objectives and instructional packages would achieve the ideal of relating the learning theories and strategies to the specific skill needs of the student and the community. To achieve the project objectives, instructors of technical-occupational and related courses were invited to submit proposals specifying the rationale for selection of the course, the ends to be achieved by participation in the project, and the process for achieving these ends. Proposals receiving a priority rating of "one" were funded, and the instructors of the approved proposals then attended a two-day workshop in late spring 1972 designed to assist with the formulation of objectives and instructional units. Following the workshop, the instructors developed behavioral objectives and instructional units for their courses, which were field tested in the 1972-73 school year. A follow-up survey of 37 instructors revealed that the project enabled them to use commercially produced materials more judiciously and facilitated team teaching within and across division lines. (SB)

*** Fresno City College. Workshop in the Preparation of Measurable Performance Objectives. Sacramento, CA: California Coordinating Unit for Occupational Research and Development, 1971. 180 pp. ED 073 258. VT 018 787. Price: MF-$0.76, HC-$9.51.

In order to produce measurable performance objectives for every vocational education program in the technical and industrial division at a Fresno community college, an educational consultant led a four-day workshop for 33 community college instructors. Funded under the Vocational Education Act of 1968 in cooperation with the California Community Colleges and the State Department of Education, this report presents performance objectives developed within each instructor's field. Although each of the 33 instructors was required to prepare the satisfactory measurable performance objectives, only 25 completed these assignments. For each general goal, only 25 completed these assignments. For each general goal, a desired outcome, a performance criterion, a rationale, and conditions required for performing the objectives are provided. For the specific tasks given to meet each goal, rationales, performance objectives, requirements for task performance, and performance criteria are included. The completed objectives are grouped alphabetically by program topics, ranging from agriculture to police science. Follow-up work, including task analyses and in-service training, is being planned. (AG)

* Handle X-Ray Equipment Safely. Science Department Learning Package. Charlottetown, Prince Edward Island: Holland College, 1975.

This competency-based learning package in dental radiography includes: rationale, "elaborations" (competencies), learning activities, resources, and evaluation (pre- and post-assessment forms and learning package evaluation forms). Other competency-based packages are also available.

* Health/Cosmetology: Career Education Guide. Washington, DC: Dependents Schools (DOD), European Area, 1974. ED 111 942.

These learning modules are grouped within health services and cosmetology and include behavioral objectives, module outline, list of materials and resources, and laboratory activities.

* Housman, J.L. et al. Individualized Study Guide on Apiculture: Student Guide. Curriculum Materials for Agriculture Education. Blacksburg, VA: Virginia Polytechnic Institute, 1974. VT 101 011

This study guide contains information and lessons for training for entry-level jobs in beekeeping. Each lesson plan includes: activity (and performance objectives), information and project sheets, glossary and references, quizzes, and answer sheets.

* Individualized Instruction in Occupational Education. Final Report. Raleigh, NC: North Carolina State Department of Public Education, Sanford Research Project, 1974.

This document provides an appendix of sample competency-based instructional materials from the Sanford Project. Includes masonry, carpentry, metals, drafting, typing, and distributive education task packages as well as sample competency statements, a unit test, an instructor's performance checklist, a student progress chart, vocational skill list, student survey form, and staff development plan.

* Individualized Material for Industrial Education Based on the AVA Booklet, "A Guide to Improving Instruction in Industrial Arts." Detroit, MI: Wayne State University, n.d. VT 011 399. ED 040 303.

These learning modules contain competency-based instructional elements. Format consists of objective, prerequisite, activity, and posttest.

* Interstate Distributive Education Curriculum Consortium (IDECC) LAPS. Columbus, OH: The Ohio State University, Ohio Distributive Education Materials Lab, 1974.

A series of competency-based learning activity packages (LAPS) which reflect the following occupational areas: advertising; communications; display; human relations; mathematics; merchandising; operations/management; product/service technology; and selling. Also included are such support materials as: The Ohio Handbook for Effective Use of LAPS; Student Orientation Handbook; and Learning-Manager's Guide.

* Instructional Materials (no titles). Minneapolis, MN: Suburban Hennepin County Area Vocational-Technical Centers, District Office, 1975.

Sample available documents and materials include:
1. development of a teacher task inventory;
2. cumulative record form;
3. student certificate listing competency ratings within general competency blocks;

4. occupational description, program blocking, task detailing sheet, general performance objective, evaluation for the general and specific objective; and
5. "Individual Learning Pak" (Shielded metal arc welding - flat position).

* Instructional Support System for Occupational Education in New York State (ISSOE). Albany, NY: New York State Education Department, The Office of Occupational Education, State University of New York at Albany, 1976.

This curriculum in auto mechanics and office training (to be field tested 1976-1977) offers a performance-based organization pattern for courses and is composed of the following components: units, modules, tasks, code, major objectives, enabling objectives, suggested instructional content, and criterion-referenced measures. Actual learning activities are to be written by the teacher with the system as a base. The curricula were developed by the Cornell Institute for Research and Development in Occupational Education. Not generally available for purchase.

* Introduction to Technical Drafting; Carpentry; Basic Technical Drafting; Bricklaying. Sanford, NC: Sanford Research Project and Sanford Central High School, 1974.

Materials are divided into unit, task package, prerequisite, rationale, objective, learning activity, learning practice, and posttest.

* Learning Guides. White Bear, MN: (916) Vocational-Technical Institute, 1972-76.

Guides (5,800 to date) include student data, terminal performance objective, micro-performance objective(s), agreement, learning steps and resources, and products/ performance checklist.

Mid-America Vocational Curriculum Consortium, Incorporated (MAVCC). Curriculum Manuals (Teacher and Student Editions). Stillwater, OK: MAVCC, 1975-77.

Manuals are divided among major course areas which, in turn, are divided into instructional units. Each unit contains the following components:

1. statement of objectives (performance objectives)
2. teacher and student activities (activities and resources)
3. information sheets
4. transparency sheets
5. assignment sheets

6. job sheets
7. unit criterion-referenced test (test items sequenced to correlate with the objectives)
8. answers to unit test (teacher edition only)

MAVCC products available are:

.Occupational Child Development
.Agricultural Sales and Services
.Food Service: Production and Service
.Automobile Emission Control
.Snowmobile Repair

MAVCC products available by Fall 1977 are:

.Diesel Engines
.Attitude Development and Human Relations
.Dental Assistant
.Outboard Repair
.Lawn and Garden Equipment Repair
.Chainsaw Repair
.Residential Wiring
.Motorcycle Repair
.Basic Small Engine Repair
.Air Conditioning and Refrigeration

* Reeder, Dean. Vocational Agriculture 4: A Curriculum Guide--12th Grade. Revised. Stillwater, OK: Oklahoma State Department of Vocational and Technical Education, Curriculum and Instructional Materials Center, 1974. ED 117 406

This guide contains 27 units organized into four modules: farm business management, leadership and careers, plant and soil science, and agricultural mechanics. Provides objectives, activities, information sheets, assignment and answer sheets, job sheets, and tests.

* Skyline Career Development Center, Dallas Independent School District. Student Learning Plans. New York, NY: Harper & Row Publishers, Incorporated, 1976.

This is a series of 32 competency-based learning guides with such support documents as Teacher Implementation Plan and Evaluation Instruments. Student learning plans are available in the following areas:

Ornamental Horticulture	Electricity
Floral Design	Plumbing
Ornamental Crop Production	Materials Processing
Landscape/Turf Development	Machine Shop
Child Development	Welding
Cosmetology	Sheet Metal
Carpentry	Technical Drafting
Masonry	Music
Business Administration	Food Preparation
Fashion Design	Shorthand

Apparel Assembly
Cutting Production
Merchandising
Pattern Drafting
Automotive Technology
Automotive Body Technology
Diesel Technology
Typewriting
Simulated Office
Accounting
Communications Lab
Keypunch
Concepts of American Business

* A Study for the Articulation of Competency-Based Curricula for the Coordination of Vocational-Technical Education Programs. Final Report. Baton Rouge, LA: Louisiana State Department of Education, 1976. VT 102 839. VT 102 843.

These competency-based curriculum guides for drafting, refrigeration and air conditioning, office, nursing, and electronics occupations include terminal and performance objectives and criterion-referenced measures. Several of the guides provide task lists and task analyses.

* Time-Free Modular Competency-Based Curricula. Montgomery, AL: Link Educational Laboratories, 1973.

These curricula are divided into modularized units in 26 subject areas and includes learning objectives, learning activities, materials, tests, instructional resource lists, and a filmstrip and cassette for instructor orientation. The subject areas are as follows:

Engine Tune-up
Brake & Front End
Transmission Specialist
Auto Body Repair
Welding
Industrial Electricity
Basic Electronics
Air Conditioning & Refrigeration
Electrical Appliance Repair
Radio & Television
Auto Service Technician
Drafting
Machine Shop Operations
Basic Accounting
Clerical Skills
Secretarial Skills
Small Gasoline Engine Repair
Teacher Aide
Solid Waste Operator
Liquid Waste Operator
Short Order Cook
Executive Housekeeper
Masonry (Home Building)
Plumbing (Home Building)
Carpentry (Home Building)
Electrical Wiring (Home Building)

* Welding for Related Occupations. Hastings, NE: Central Technical Community College, n.d.

This text is used in course #140.10 currently implemented at CTCC. It was developed for students requiring a basic welding course and is not available for a welding technician major. No inert gas welding processes are covered.

* West Virginia Vocational Curriculum Laboratory. Competency-Based Curriculum in Business and Office (Pre-Vocational), Home Management, and Nursing Assistant. Charleston, WV: West Virginia Board of Education, Bureau of Vocational, Technical Adult Education, 1976.

The curriculum includes teachers' sections, introductions, student competency sheets (and learning activities), supplements, and evaluation sheets. The business and office program differs in that it is pre-vocational. It is similarly formatted, but is designed to provide exploration experiences, not to develop proficiency in the occupational competencies. It could, however, provide resources for a competency-based vocational course of study.

General References

* Adams, Robert E. "Building Competency Models: One Approach to Occupational Analysis." Canadian Vocational Journal. 10(November 1974): Pg. 36-41, 54.

Describes a DACUM competency model as a form of occupational analysis and an evaluation instrument, and discusses chart construction via a committee of experts (incumbent workers) supported by a coordinator. Discusses (1) general areas of competence, (2) the first "band" of competencies, (3) remaining "bands," (4) skill review, (5) sequencing, (6) structuring, (7) vertical scanning, and (8) chart preparation.

*** Alabama State Department of Education. Performance Based Instruction: The Development of Research Based Teacher-Learning Activities Systems for Vocational Education in the State of Alabama. Montgomery, AL: Alabama State Department of Education, Division of Vocational Education, 1976. 39 pp. ED 137 498. Price: MF-$0.83, HC-$2.06.

A description of the basic elements of a research based instructional system for educational personnel development for vocational programs is presented in this report. This description indicates how the system derives inservice competencies for teachers from pupil performance and eventually results in institutionalized change in preservice teacher education programs. The seven basic elements (all based on research studies) from which the instructional system was derived are described in separate sections: Performance Catalogs from V-TECS/DELTA (Vocational-Technical Education Consortium of States/ Designing Educational Learning from Task Analysis): Relating the Pupil to the Curriculum; Analysis of Teaching-Learning Activities Systems; The Instructional Supervision Training Program; Management by Objectives; Management Information Systems; and Teacher Education Modules. The last two sections of this report are a discussion of the systemic design for uniting the research based elements and of progress in the development of the delivery system for performance based instruction. Although the document reflects Alabama's educational concerns, procedures and activities are applicable to other State educational settings. (SH)

* Alvir, Howard P. How to Clarify Classroom Instuctional Goals through Performance Objectives. Washington, DC: ERIC Clearinghouse on Teacher Education, 1971. ED 056 99[illegible]

Focuses on writing instructional objectives which relate to student's career objectives and industry's needs.

Suggests implications for training programs in vocational education. Emphasizes the need for evaluation and feedback in a systems approach.

* Alvir, Howard P. How to Individualize Your Classroom Instruction by Using Performance Objectives. Washington, DC: ERIC Clearinghouse on Teacher Education, 1972. ED 074 032

Discusses use of performance objectives in the classroom as well as in the individualization of a course. Useful for its lesson plan examples and critiques (auto mechanics and advertising courses) and its discussion of the transition from traditional teaching to performance-based education.

* Ammerman, Harry L. and William H. Melching. The Derivation, Analysis, and Classification of Instructional Objectives. Fort Bliss, TX: Human Resources Research Office (HUMRRO), 1966.

Useful discussion of a sequence for the development of instructional objectives as well as the extent to which a performance action should be described.

* Andreyka, Robert E. A Florida Approach to Competency-Based Vocational Teacher Education. Paper presented at the Competency-Based Vocational Leadership Conference, Lexington, KY, 1976.

Discusses "attainments" from which more specific competencies for implementing CBI may be derived.

Andreyka, R.E. and T.S. Briley. Competency-Based Teacher Education for Industrial Education Teachers. Tallahasee, FL: The Florida State University, 1975. 108 pp.

This report contains the framework used for developing a comprehensive CBTE program for Florida's industrial education teachers. The framework was built around the following objectives: (1) determining the importance of existing teaching competencies as related to preservice, entry-level and advanced industrial teacher education, (2) classifying existing teaching competencies into clusters, (3) validating identifying and classifying preservice competencies, (4) identifying and determining the appropriateness of existing CBTE instructional materials, (5) premitting educators, teachers, and administrators to compare and contrast each university program with CBTE elements, (6) determining the extent to which a preservice CBTE program could augment existing programs in Florida, and (7) preparing specific plans for the development of CBTE instructional materials based on validated competencies. In addition, includes some of the materials developed for

the CBTE program, such as agendas, a list of competencies, workshop evaluation forms, and competency rating forms.

*** Andreyka, R.E. et al. Competency-Based Vocational Teacher Education. Paper presented at the Vocational and Adult Education Summer Workshop, Orlando, FL, 1975. 22 pp. ED 112 068. Price: MF-$0.76, HC-$1.58.

The trend toward competency-based vocational teacher education (CBVTE) is related to other significant trends: the movement toward certification by skills demonstration, the emergence of Teacher Centers, and the increasing emphasis on inservice education. CBVTE focuses on teaching competencies, expecting trainees to possess the technical or occupational skills which comprise their subject matter; it identifies teaching competencies, provides learning activities which focus on their mastery, and assesses them in real teaching situations. It is individual-, performance-, and field-based, rather than group-, content-, and classroom-based. Florida's universities and State Department of Education (vocational-technical division) are exploring CBVTE. Florida State University's (FSU) research and development project, the advanced testing of 300 CBVTE modules (which were based on exhaustive task analyses and developed in all vocational subjects in a lengthy cooperative venture at Ohio State University) has taken place on and off campus with preservice and inservice teachers. A wide variety of learning activities and feedback devices are used in the modules. Trainees practice competencies in a simulation and then in a classroom. Problems have included gaining commitment from individual faculty members and hesitant trainees. Statewide testing of the Ohio modules is being considered, and FSU plans an exemplary CBVTE program. (Author/AJ)

* Aubertine, Horace E. "Secondary Curriculum Design and Competency-Based Education." Educational Technology. 12(November 1972): Pg. 38-39.

States that CBI teacher-installers should ideally be graduates of CBI teacher education programs. Discusses alteration of teacher role: need to be able to relate information to competency objectives and to be involved in a feedback system and in assessment and curricular decisions.

* Baird, Hugh and Dwayne Belt. Some Organizational Problems Encountered in Implementing Competency-Based Education. Paper presented to the American Educational Research Association, New Orleans, LA, 1973. ED 084 221.

Although the focus of the document is implementation of CBTE programs, the organizational problems discussed can

be applied with adjustment to implementation of CBI in vocational school programs. Examples of problems encountered are: (1) decision-making by staff, (2) identification of teacher competencies, (3) the teacher-as-couselor, and (4) staff training.

Beamish, E. et al. An Assessment of Needs for Professional Personnel for Occupational Education in New York State: Post-Secondary. Ithaca, NY: Cornell Institute for Research and Development in Occupational Education, 1977. 273 pp.

This report represents the second year of a two-year effort to assess the professional development needs of occupational educators throughout New York State. This document focuses primarily on the needs of the post-secondary occupational education personnel. Twelve chapters make up this document: (1) introduction, (2) response rates, (3) occupational education profiles: statewide, (4) regional characteristics, (5) faculty profiles by type of institution, (6) chairpersons' profiles, (7) summary of methodology and facutly profile base, (8) geographic mobility (9) faculty turnover, (10) administrators' interviews, (11) implications of data for professional development of post-secondary occupational educators, and (12) perspective on faculty development: an overview. A number of implications are drawn from the obtained data and other findings which indicate the needs in statewide and regional planning with regard to professional development programs.

* Bjorkquist, David. What Vocational Education Teachers Should Know about Individualizing Instruction. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1971. VT 013 713. ED 057 184.

An excellent general overview of the elements of individualized instruction which form the foundation of competency-based instruction.

* Burns, Richard W. and Joe Lars Klingstedt, eds. Competency-Based Education: An Introduction. Englewood Cliffs, NJ: Educational Technology Publications, 1973.

Articles reprinted from Educational Technology, November, 1972. Includes the following titles:

- .Philosophical Basis for Competency-Based Education.
- .Psychological Implications of Competency-Based Education.
- .Secondary Curriculum Design and Competency-Based Education.
- .Competency-Based Education and the Open Classroom.
- .Implications of Competency-Based Education for Urban Children.

* Carpenter, Bruce. Performance-Based Instruction. Paper presented at the Maryland Vocational-Technical Education Conference, 1976.

Discusses the underlying principles of CBI, the improvement of vocational education through CBI, and CBI procedures.

Committee on Performance-Based Teacher Education. Achieving the Potential of Performance-Based Teacher Education: Recommendations. PBTE Series Number 16. Washington, DC: American Association of Colleges for Teacher Education, 1974. 47 pp. Price: $3.00.

This monograph is a series of observations and recommendations. It is a commentary rather than a conclusive treatment of PBTE. The monograph is divided into four chapters. Chapter I provides a detailed introduction to the document. Chapter II provides a context for viewing PBTE (historical characteristics, promises, pitfalls, differences in terminology). Chapter III presents a series of observations and recommendations on ten aspects of PBTE movement. Finally, Chapter IV provides a summary of the committee's beliefs, hopes, and fears concerning PBTE.

* Competency-Based Education--An Annotated Bibliography. (Fred W. Harrington, Project Director). Charleston, WV: West Virginia State Department of Education, Bureau of Vocational, Technical, and Adult Education, 1974. VT 102 044.

Listed materials were collected for EPDA Project Number WV-73-7, "Familiarizing Teachers with New Curriculum Materials." Lists competency-based curriculum models and materials to assist fulfillment of the project objective: "to train vocational teachers in competency-based curriculum models so that they could apply this knowledge of new curricular materials to the development of new instruction."

*** Cook, F.S. et al. Two VAE System Models: A Model for a Competency-Based Instructional System. The VAE Accountabilty Model. Competency-Based Teacher Education Series Number 2. Detroit, MI: Wayne State University and Michigan State Department of Education, 1972. 32 pp. ED 076 746. Price: MF-$0.76, HC-$1.95.

This booklet is one in a series which describes a competency-based teacher education program developed by the staff of the Department of Vocational and Applied Arts

Education at Wayne State University. This booklet discusses instructional systems and accountability, which are two important facets of the program. Part I describes a model of the competency-based instructional system, which utilizes a systems approach to program development. The elements of the system, including competencies, performance objectives, needs assessment, delivery system, and evaluation plus the general procedures followed to implement the system are covered. Part II presents an accountability model designed to facilitate the implementation of an instructional system. The accountability model allows for input from the teacher, student, and administration. A booklet describing the competencies and performance objectives is available as VT 019 884, and a progress report is available as VT 019 885 in this issue. (SB)

*** Cook, G.M. Why Competency-Based Teacher Education? Paper presented at National Association of Independent Schools Annual Conference, held in Washington, DC, March 2, 1973. 16 pp. ED 074 030. Price: MF-$0.65, HC-$3.29.

Reviews the competency-based teacher-education movement. The first portion discusses definitions of CBTE. The second portion reviews basic elements of CBTE: individualized instruction, personalization of instruction, student involvement, effective management systems, and a field-centered approach.

*** Cope, R.G., ed. Information for Decisions in Post-Secondary Education, (15th Annual Forum, St. Louis, MO). Tallahassee, FL: Florida State University Association for Institutional Research, 1975. 437 pp. ED 131 755. Price: MF-$0.83, HC-$23.43.

These proceedings include 83 papers and 24 abstracts of papers contributed at the AIR's Annual Forum. Practitioners at two- and four-year college and universities, public and private (teachers, department chairmen, and administrators) as well as theoreticians are addressed. Papers fall into 13 categories: (1) presidential address; (2) planning and management analysis; (3) financial analysis; (4) faculty evaluation, analysis, and development; (5) decision strategies for management; (6) program budgeting; (7) state level planning and analysis; (8) affirmative action and consumer protection; (9) student admission, retention, and follow-up; (10) institutional research: theory and technique; (11) consensus developing techniques; (12) simulation models and management information systems; and (13) course and curriculum analysis. (MSE)

Dayer, H.D. Competencies Required by Beginning Occupational Education Teachers. Buffalo, NY: State University of New York at Buffalo, 1977. (Unpublished Doctoral Dissertation). 132 pp.

This dissertation utilized a list of CVE, Ohio State University modules to determine which competencies were most important for preservice programs for beginning teachers. The study involved vocational teachers and directors in the Board of Cooperative Educational Services occupational centers throughout New York State. To secure the needed information for this study, the research utilized the descriptive-survey method of research. Some of the conclusions drawn from this study are that: (1) the performance competencies included in this research instrument represent a reasonably inclusive list of occupational teacher professional needs, (2) professional education, preservice programs are urgently needed in New York State, and (3) most occupational teachers in New York State, especially in the trade and industrial service area have acquired little college-teacher preparation.

*** Doty, Charles R. and R. Gepner, eds. Post-Secondary Personnel Development, Volume I. Proceedings of the National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less Than Baccalaureate Degree, held in St. Louis, MO, January 18-21, 1976. 496 pp. ED 131 891. Price: $13.50 and $1.50 postage. Available from New Jersey Vocational-Technical Curriculum Laboratory, Rutgers University.

Compiled in this document are papers presented at a conference on personnel development in post-secondary vocational and technical education programs of less than baccalaureate degree. The conference resulted from a recognition of the problem of employing technically competent, yet unprepared to teach, persons from business and industry. Topics of the papers include: (1) Personnel Development as a Priority; (2) Notes on Personnel Development Programs; (3) Attitudes of a New Community College Instructor; (4) Role of Faculty Development in Two-Year Post-Secondary Institutions; (5) Court Decisions Affecting Teacher Evaluation; (6) Faculty Evaluations--What Do They Mean?; (7) Faculty Evaluation in Community Colleges; (8) A Model for Implementing Competency-Based Programs; (9) An On Campus Teaching Consultant; (10) Maximum Effectiveness: Staff Development; (11) Preparing Post-Secondary Faculty Members through Preservice Programs; (12) Faculty Development in the Community College; (13) Adjunct Occupational Instructors; (14) Teaching Strategies for Post-Secondary Institutions;

(15) Technical Upgrading of Instructors; (16) Non-traditional Students; and (17) Career Development of Administrators. Six conference group reports and extensive annotated bibliographies complete the document. (JDS)

*** Doty, Charles R. and R. Gepner, eds. Post-Secondary Personnel Development, Volume II. Proceedings of the National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less Than Baccalaureate Degree, held in St. Louis, MO, 1976. 338 pp. ED 131 892. Price: MF-$0.83, HC-$18.07.

Descriptions/ Staff Improvement/ *Teacher Improvement/ *Vocational Education Teachers.

Personnel development programs for post-secondary vocational and technical faculty in selected post-secondary educational institutions in several states are identified and described according to the following criteria: (1) objectives of the program; (2) organization of the program; (3) cost of the program; (4) motivation of staff; (5) pedagogical skills emphasized; (6) technical content emphasized; (7) constraints on the program; (8) the evaluation process; and (9) program changes needed. Programs at 25 colleges in 17 different states are described. The programs are institutional programs in continuous operation, not departmental or for special groups. Each is focused on upgrading the teaching skills of technically competent, yet pedagogically unprepared, persons from business and industry who are instructors in vocational and technical education in community colleges and technical institutes. (Author/JDS)

* Drumheller, Sidney. Handbook of Curriculum Design for Individualized Instruction: A Systems Approach. Englewood Cliff, NJ: Educational Technology Publications, 1971.

Purpose is to provide guidelines for the development of curriculum materials from behavioral objectives that, when plugged into the Drumheller Design Model, will determine the specifications for self-paced curriculum materials. Maintains that a curriculum designer can use the procedure to produce comprehensive sets of objectives and then spend necessary energy on development of learning experiences. Discusses implementation of the model.

Elam, S. Performance-Based Teacher Education: What is the State of the Art. PBTE Monograph Series: Number 1. Washington, DC: American Association of Colleges for Teacher Education, 1971. 28 pp.

This monograph is designed to be useful to teacher educators and others striving to improve preparation programs for professional school personnel. It contains a series of working papers in the area of performance-based teacher education. The document is divided into the following sections: (1) Introduction (purpose of the paper--what is PBTE?) (2) Background (why PBTE now--historical context--education's response) (3) A Description of PBTE (essential elements, implied characteristics, and related and desirable characteristics, (4) Implications of PBTE, (5) Issues and Concerns, and (6) Summary. Also included is a list of the AACTE PBTE project committee members.

English, L.J. and R.M. Laws. A Pilot Project to Generate Critical Analysis of Problems and Processes in Operational Strategies and Components Essential to College-Wide Competency-Based Curricula. Dover, DE: Delaware Technical and Community College, 1976. 86 pp.

This study investigated problems, processes, components and operational strategies essential for college-wide development of competency-based curricula. A number of additional objectives were also identified. Briefly, results indicated that: (1) pre-planning and management were key factors in the development of CBE; (2) a new relationship between student services and instructional services must be considered in order to operationalize a competency-based instructional program; (3) additional emphasis must be focused on the development of curriculum content in the affective domain; and that (4) CBE at the community college level could be developed with presently available personnel through the application of systems technology. The appendix contains checklists, evaluation criteria forms, survey questionnaire, and course-of-study outlines.

*** Evans, R. and D.R. Terry, eds. Changing the Role of Vocational Teacher Education. Bloomington, IL: McKnight and McKnight Publishing Company, 1971. 219 pp. ED 059 399. Price: $5.36.

An institute attended by persons representing vocational education, general education, and state and federal government was held to review the state of the art in vocational teacher education. Discussion activities centered around state of the art papers, and this book contains those chapters based on revisions of the major papers. (1) "The Quality of Life in the Seventies and Implications for Vocational Teacher Education" by J.C. Willers; (2) "Assumptions Underlying Preservice Programs for Beginning-Level Vocational Teachers" by J. Moss Jr.; (3) "Assumptions Underlying Inservice Vocational Teacher Education Programs" by A.D. Hill; (4) "Curriculum

Development in Vocational Teacher Education: State of the Art and Developmental Needs" by E.J. Simpson and M.L. Ellis; (5) "Organizational Structure of Vocational Teacher Education" by R.E. Taylor and A.J. Miller; (6) "The Context of Vocational Teacher Education" by R.E. Taylor and A.J. Miller; (7) "The Need for Vocational Educational Personnel" by T.G. Foran and J.J. Kaufman; (8) "Critique of Manpower Projections for Instructional Staff in Vocational Education" by G.G. Somers; and (9) "Evaluation of Vocational Teacher Education" by D. Sjogren. (SB)

*** Finch, G.R. and R.D. Harris, eds. Implementing Competency-Based Teacher Education: Future Directions for Vocational Teacher Educators. Papers presented at The Institute on Competency-Based Teacher Education for Virginia Vocational and Technical Teacher Educators (Blacksburg, VA, November 23-26, 1975). Blacksburg, VA: Virginia Polytechnical Institute and State Unviersity, Division of Vocational-Technical Education, 1976. VT 103 378.

This publication is intended to provide direction for those who contemplate establishing a competency-based program for vocational teachers. It should be of value as a basic resource in the area of competency-based teacher education (CBTE) and serve as a useful tool for CBTE program implementation and improvement. Major papers developed for the institute of competency-based teacher education are included in the document, as well as two papers prepared after the institute was held. The papers and their authors are: (1) "The Challenge of Competency-Based Teacher Education" by Ruth D. Harris and Curtis R. Finch; (2) "Competency-Based Education: Status and Research" by W. Robert Houston; (3) "Instructional Materials for Competency-Based Teacher Education" by James B. Hamilton and Glenn E. Fardig; (4) "Delivering Teaching/Learning for Competency-Based Education" by Daniel E. Vogler; (5) "Writing Competency-Based Education Modules" by Daniel E. Vogler; (6) "Concerns in the Implementation of Competency-Based Teacher Education" by Martha Lee Blankenship; and (7) "Toward a Framework for Implementing Competency-Based Teacher Education" by Curtis R. Finch and Ruth D. Harris. Several papers include a list of references; the references for the paper on Instructional Materials constitute ten pages. (Author/RG)

** Frank, Frederick P. and Conard L. White. New Opportunities in Vocational Education: Final Report. DeKalb, IL: Northern Illinois University, Department of Educational Administration and Services, 1977.

The main objective of this program was to use and adapt to local conditions and to project participants' needs the Southern Illinois University and Illinois State University developed competency-based model graduate programs for preparing occupational education administrators. Fifteen fellows, all women and/or black persons, were enrolled in the program. The program which was conducted from July 1976 to June 1977 had three major goals: (1) to upgrade the professional skills of the participants in vocational education, educational administration and supervision, and subject matter specialization; (2) to open the eyes of the participants in regard to the world of vocational education and the role of the administrator; (3) to develop self-awareness and actualization toward future roles in a traditionally white, middle class, male environment of the educational administrator.

Fortney, M.H. Performance-Based Instruction Curriculum Development in Vocational Education: The State-of-the-Art. Montgomery, AL: Division of Vocational Education and Community Colleges, Alabama State Department of Education, 1975. 77 pp.

This document deals extensively with the four major elements which seem to be creating changes in vocational education: the knowledge explosion and the efforts to manage the information produced, the rise of technology, the change in the structure of thinking induced by cybernetics, and the rise of the concept of accountability. The paper further examines and describes several major research efforts in developing curricula to cope with change. Topics include: forces contributing to curriculum change in vocational education, the concept of curriculum response to change, the development of performance/competency-based education, performance-based education in Alabama, related research assisting performance-based teacher education development in Alabama, performance-based certification for educational personnel, and implications of the State-of-the-Art. The document is of value to those attempting to familiarize themselves with the State-of-the-Art in performance-based education.

Halfin, H. et al. Professional Education Competencies Needed by Beginning VTAE Teachers. Menomonie, WI: Center for Vocational Technical and Adult Education, 1977. 65 pp.

The purpose of this study was to identify the professional teaching competencies needed by beginning teachers of the Vocational Technical Adult Education System. Alternative delivery systems for attaining professional competencies are also recommended. This study provides useful information for vocational instructors, supervisors, and adminstrators interested in developing a certification

curriculum for new teachers, and directing realistic, competency-based professional development delivery systems. Included in the appendices are a table of data results of total groups and seven sub-groups for competencies, competencies related to Ohio PBTE modules, and a survey instrument.

Hamilton, J.B. and K.M. Quinn. Resource Person Guide to Using Performance-Based Teacher Education Materials. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1975.

This resource person guide is provided to assist in the utilization of performance-based professional vocational teacher education curricular materials developed by CVE. Further, this guide--as the author's report--can help individuals perform the functions of the resource person in an effective and efficient manner. This document is divided into two major sections and contains a number of related materials in the appendices. In the first part of this guide, the following topics are discussed: performance-based teacher education, characteristics of PBTE programs, the Center's PBTE materials and essential elements of the system defined. The second part of this guide is devoted entirely to the resource person's responsibilities. Topics in this section include: (1) planning the teacher's program, (2) guiding the learning activities, and (3) assessment of teacher performance: the final experience and managing the role of the resource person.

*** Handley, H.M. et al. Assessment of Inservice Vocational Teacher Education in Mississippi. Mississippi State, MS: Mississippi Research Coordinating Unit for Vocational-Technical Education, 1973. VT 101 081.

This second part of a study of vocational teacher education in Mississippi evaluates the inservice phase of teacher education while the first and third parts deal with preservice education and teacher attitudes concerning work values and jobs. This report summarizes vocational educators' perceptions of how well they are able to perform specific tasks after completion of inservice programs. The effectiveness of two types of programs is evaluated - those conducted by institutions and those conducted by the division of vocational and technical education of the Mississippi State Department of Education. Questionnaires were mailed to 1185 persons who had taught more than three years in vocational education and to state-level supervisors and teacher educators. Over 700 replies were used to supply data which produced findings concerning the skill gained by inservice education, differences in courses, and variations among the vocational service areas represented.

Recommendations for improving inservice training in Mississippi are drawn from the findings. The two related studies are available as VT 101 080 and VT 101 082. (Author/MU)

Harris, E. A Study of Demand and Factors Related to the Improvement of Occupational Education Personnel Development Programs in the State of Illinois. DeKalb, IL: Northern Illinois University, 1973. VT 100 733.

The purpose of this study was to gather data on factors for improving occupational teacher education. Survey forms were mailed to the administrators of high schools, area vocational centers, and community college in Illinois. Responses representing 83 percent of the total secondary and community college population in the state were used in compiling the data tabulated in the report. Findings led to recommendations of five goals for improving the occupational teacher education programs in Illinois. These goals included: (1) improve the inservice and preservice teacher education programs in the state; (2) develop a system for evaluating occupational personnel performance on the job; (3) improve the techniques of recruitment; (4) increase the resources devoted to teacher education programs in occupational education; and (5) improve the master plan for occupational education. Objectives and strategies for each goal are given. (MU)

Holcomb, E.R. et al. Guidelines for Occupational Program Planning. Los Angeles, CA: California State Department of Education, 1977. 126 pp.

This handbook provides broad guidelines for establishing, modifying, and terminating occupational programs. Major directions to this manual were provided through a task force which included a consortium of representatives from community colleges, high schools, and regional occupational programs. An occupational guidelines flow chart is presented at the beginning of each chapter to provide an overview of various items to be discussed. Each chapter heading in this handbook is identical to each of the items presented in the chart.

Houston, R.W., ed. Exploring Competency-Based Education. Berkeley, CA: McCutchan Publishing Corporation, 1974. 426 pp.

Thirty-two leaders in the competency-based movement attempt in this book to put into perspective the issues that surround competency-based education. The papers are arranged in five parts. Part I covers the meaning of competency-based education. Part II presents critics and

advocates of competency-based education. Part III describes models for identifying competencies. Part IV focuses on assessment and competency evaluation--both for student achievement and program effectiveness. Part V entitled "Changing American Education" examines fundamental notions of the institutional process. In addition, the following items may be found in this section: subject index, list of materials centers/activities, list of national competency-based education centers, and a comprehensive bibliography containing over 700 entries. This publication should be of great assistance as a reference tool to individuals concerned with anticipated and current developments in teacher education.

*** Johnson, C.E. Implementing Competency-Based Teacher Education. Speech delivered at a Competency-Based Teacher Education Conference. Held at Boise, ID, February 27-28, 1974. 32 pp. ED 092 537. Price: MF-$0.75, HC-$1.85.

This document is a speech concerning the problems and issues involved in implementing a competency-based program at the University of Georgia. Discussed are two initial phases of implementation which began in 1968: (1) individualizing existing professional subject matter program for preservice preparation and an extension of the period of field experience, and (2) identifying teacher competencies. Author feels that many problems were experienced because of a failure to establish a common conceptual understanding to the term "competency." The distinction is made between "technical teaching competencies," which are skill-like competencies essential to professional performance, and "professional teaching competencies" which are complex professional behaviors that no two people ever perform the same. Author adds that he and his colleagues place "personal attributes" ahead of teaching competencies. The author discusses the present organization for instruction at the University of Georgia and other practical concerns which arise during implementation. A brief list of recommendations and an extensive appendix are included to provide such information as: references cited, additional references, current activities in CBE, PBTE programs, and sources of additional information about PBTE.

* Klingstedt, Joe Lars. "Learning Modules for Competency-Based Education." Educational Technology. 12(November 1972): Pg. 29-31.

Describes the purpose of a learning module plus six major parts: objectives, pretest, rationale, learning alternatives, posttest, and resources.

*** Kocher, E. A Competency-Based Program for Preparing Vocational Education Teachers. Final Report. Lincoln, NE: Kearney State College and Nebraska State Department of Education, 1975. 121 pp. ED 118 919. Price: MF-$.83.

The objective of the project was to identify and reach consensus about common core competencies deemed necessary to all vocational teachers, with the goal of developing a strategy for the implementation of competency-based teacher education in Nebraska. A random sample of vocational educators selected a list of vocational education teacher competencies that is appended to the report. The competencies are grouped according to the headings of planning, evaluation, instruction, management, public and human relations, guidance, youth organizations, and professional role. Included is a bibliography of competency-based materials organized by the State, and a list of competency-based modules currently in use in teacher education programs. Other materials appended to the document are the project PERT (Program Evaluation Review Technique) and milestone shorts, the original list of competencies; correspondence with the advisory committee research coordinating units and State Departments of Education; and quarterly reports. (NJ)

*** Korb, A.W. A Performance-Based Education Program in Vocational-Technical Teacher Education and Two-Year Vocational-Technical Associate Degree Programs. Final Report. Haure, MT: Northern Montana College, 1975. 94 pp. ED 137 513. Price: MF-$0.83, HC-$4.67.

In addition to the goal of totally acquainting faculty members with the concept of performance-based education, the one-year project at Northern Montana College had four major objectives: (1) identify colleges, universities, technical institutes, and area vocational schools throughout the Nation which are currently conducting performance-based programs in vocational-technical teacher education and two-year vocational-technical programs; (2) identify performance goals and delivery systems for each department within the vocational-technical division; (3) translate existing courses into performance-based criteria and implement them into the teaching schedule for field testing; and (4) begin implementation of a feedback system which is essential to the process of evaluating and refining the performance goals and delivery systems adopted.

* Mager, Robert F. Preparing Instructional Objectives. Belmont, CA: Fearon Publishers, Incorporated, 1962. VT 024 931.

The basic book on behavioral objectives. Clearly explains the development of accurate, understandable objectives. This is a programmed course.

McClellan, V.B. A Study of the Competencies Unique to the Educators of Adults in the Vocational, Technical, and Adult Education System. Madison, WI: Center for Vocational, Technical, and Adult Education, 1975. 88 pp.

This study identifies the unique competencies necessary to effectively teach adults in the Wisconsin Vocational, Technical, and Adult Education System. It also compares results of this study with an existing study to determine unique competencies, develops a model of an effective adult educator, and identifies a valid teaching style for adult educators. A number of items such as questionnaires, recommendations, lists of competencies, survey instrument and cover letter complete this useful study. This publication may be of assistance to vocational educators of adults by helping them develop better programs, instruction, relationships with adult learners, and evaluation of programs and instruction.

Munsterman, R.E. and D.L. Brown. A Model for Competency-Based Vocational Teacher Evaluation. Final Report. Indianapolis, IN: State Board of Vocational and Technical Education, 1977. 10 pp.

This paper summarizes the competency-based vocational teacher evaluation project and points to the fact that competency-based education is lagging behind competency-based teacher training. This research could be utilized in planning inservice programs.

*** National Advisory Council on Education Professions Development. Competency-Based Teacher Education: Toward a Concensus. Washington, DC: National Advisory Council on Education Professions Development, 1976. 49 pp. ED 121 791.

The major focus of this report is on the merits of competency-based teacher education as a mode of improving the process of teacher education. The report is also an effort to reach a consensus among CBTE advocates and critics. The council in this report attempts to provide the reader with an overview of (1) what competency-based education is, (2) what it means in teacher education, and (3) CBTE as a process.

*** Nelson, O. et al. An Investigation of the Teacher Competencies Needed to Utilize Diagnostic Test Data in Prescribing Occupational Learning Experiences in Teaching EMRS. Final Report. Menomome, WI: University of Wisconsin, Stout Center for Vocational, Technical, and Adult Education, 1976. 110 pp. ED 137 534. Price: MF-$0.83, HC-$6.01.

A study was conducted to determine the teacher competencies needed in order to develop valid and effective occupational learning experiences for educable mentally retarded (EMR) students based on available diagnostic test data and information. Four-member teams were selected from each participating school (four secondary and two post-secondary schools). Each team had a special educator, a vocational instructor, an audiovisual specialist, and a counselor, special educator, or vocational educator depending on the most effective team organization within the participating school. An action research design was used. As vocational teachers on the teams identified problems in modifying instructional materials, teaching strategies, and classroom procedures, team and staff members designed solutions. These solutions were then implemented by the vocational teacher and evaluated. Transportability of the developmental experiences and the resulting products were assessed with teams in one or two of the other participating schools. Three workshops were conducted focusing on (1) identifying participants' instruction; (2) techniques for effective communication, task analysis, rewriting reading materials, and developing mediated instruction; and (3) teaching techniques, classroom management strategies, and practical evaluation. Some of the competencies which vocational teachers need to acquire are use of evaluation information in designing and managing instruction, behavior observation skills, performance evaluation techniques, individualizing instruction for EMR students, identification and restructuring of jobs, task analysis procedures, and skill in designing concrete learning experiences. Based on the evaluation of the workshops and critical competencies identified by the participants, a two-week workshop agenda was developed which should provide the basic competencies needed.

Niccum, B.K. Assessment of the Professional Teaching Competencies Needed by Call-Staff Teachers in the Wisconsin VTAE System. Menomonie, WI: Center for Vocational, Technical, Adult Education, 1973. 46 pp.

The purpose of this study was to identify the professional teaching competencies needed by part-time teachers within the Wisconsin VTAE system. The identification of the preferred delivery system was also determined. This monograph is organized into four chapters: Problem and Rationale; Methods and Procedures; Report of the Findings; and Recommendations. An appendix completes this study.

This document could be of value to post-secondary instructors and administrators interested in the professional teaching competencies of their part-time staff.

Northwest Regional Laboratory. Competency-Based Education Sourcebook. Portland, OR: Northwest Regional Educational Laboratory, 1977. 500 pp. Price: $22.50.

This is a very current, comprehensive guide for curriculum planners, teachers and other people who may be involved in the program planning amd implementation of a competency-based education. The guide lists resources available for identifying instructional outcomes, measuring outcome attainment, promoting instructional outcomes and managing program operation. The guide is indexed making it easy for the user to locate information.

Norton, R.E. et al. Performance-Based Teacher Education: The State of the Art. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1976. 107 pp.

This state-of-the-art report on PBTE attempts to offer the reader a summary of what has happened and what is happening in PBTE. It is written for all who are concerned about, and interested in, improving the professional development of teachers for our institutions. The following topics are discussed: (1)introduction--our perspective, audience, (2)antecedents of the PBTE movement--need for change, impetus toward PBTE, (3)important definitions, (4)characteristics of PBTE programs, (5)advantages and limitations of PBTE, and (6)current efforts, models, and projects.

*** Otto, P.B. A First Course in a Competency-Based/Field-Based Teacher Preparation Program. Paper presented at the Annual Conference of the Association of Teacher Educators. University of South Dakota, 1976. 12 pp. ED 121 795.

In 1973, the School of Education at The University of South Dakota reorganized from a departmental structure to a cross-disciplinary team organization. Prospective teachers were provided with a broad set of practical classroom experiences over a longer time span than was practical with previous programs. An ad hoc committee revised the "Educational Foundations" course goals and objectives. This course was later structured so as to assist students: (1) to familiarize themselves with the services and functions of the School of Education, (2) to assess their personal values with respect to a career in education, and (3) to make rational decisions with regard to a career in education. Presenters were asked specifically to avoid lecturing and to use activity-centered approaches. Evaluation was utilized throughout the course, and as a final requirement, each participant had to submit a final position paper on why

he or she would or would not pursue a teaching career. The appendix provides a listing of the objectives used in this setting.

*** Pascale, P.J. et al. Competency-Based Teacher Education: An Annotated Bibliography. Youngstown, OH: Youngstown State University, 1974. 71 pp. ED 095 115. Price: MF-$0.75, HC-$3.15.

This annotated bibliography is divided into four sections and covers material published between 1952 and 1974. The first section is an introduction that reviews the history of the recent development of competency-based teacher education (CBTE). Section II is the annotated bibliography, with 158 listings arranged alphabetically by author. An update based on computer scans of the literature includes an additional 36 citations. There is no differentiation between books, monographs, and journal articles. Appended to this section are listings of recent books, planned books, monograph series, and newsletters on CBTE. The third section lists schools with CBTE programs. The schools are listed alphabetically, with codes indicating the program level and subject matter. The fourth section lists current resources on CBTE.

Pautler, A.J., Jr., ed. The Future of Vocational Education. Papers from Bicentennial Conference on Vocational Education, Minneapolis, MN, October 10-13, 1976. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1977. 234 pp. Price: $13.00.

Leading experts attending the Bicentennial Conference on Vocational Education attempt to provide valuable insight into the problems and issues of the near future. There are eight sections in this document, including such topics as: (1) Education-Manpower Policy, (2) Planning for Vocational Education in the Future, (3) What Should be Taught, (4) Special Needs, (5) The Youth Perspective, (6) Delivery Systems for Vocational Education, (7) Conference Summary Statement, and (8) Conference Overview and Recommendations. Section Four and Six may prove to be of particular interest to post-secondary personnel. The following articles are among those included in these two sections: Section Four: Meeting the Future Vocational Education Needs of American Natives, The Implications of the Future Participation of Minorities and Women in Vocational Education Programs, Meeting the Needs of the Handicapped, and Section Six: Comprehensive Competency-Based Education--a bridge between liberal and applied learning in post-secondary education: America's contribution to the future of education.

Performance-Based Teacher Education: A Source Book. Aquino, John, comp. PBTE Series Number 21. January, 1976. 131 pp. ED 118 529. Price: MF-$0.83, HC-$7.85.

This document is a compilation of articles, extracts of books or articles, and abstracts of material on PBTE. It is divided into four sections. The first section contains background material and provides definitions, rationales, and historical contexts for PBTE. The second section has material on program design, evaluation and assessment, personalization and individualization, and field-based support systems for PBTE. The third section is divided into the following headings: general implications, staff development, governance, accountability, state agencies, and accreditation issues in PBTE. The fourth section presents a critique of PBTE from AFT and another from a general standpoint.

*** Perkins, L.H. Competencies of Trade and Industrial Teachers: As Perceived by Teachers, Supervisors, School Administrators, and Teacher Educators. Tallahassee, FL: Florida State Advisory Council on Vocational and Technical Education and University of West Florida, 1975. 67 pp. ED 112 067.

The purposes of the study were (1) to ascertain the professional competencies needed by trade and industrial teachers in order to be perceived as effective by successful trade and industrial teachers, administrators, and supervisors and teacher educators; (2) to ascertain whether the teachers felt that they had the opportunity and instruction available to develop or acquire the competencies needed to teach effectively; and (3) to construct an instrument for administrators to evaluate the performance of trade and industrial teachers. The 169 participants identified 164 competencies in rank order of importance as those competencies needed by effective trade and industrial teachers. Teachers, teacher educators, administrators and the supervisors indicated a high degree of agreement relative to ratings assigned to the 164 competencies. Competencies were grouped under three clusters: (1) essential preservice competencies, (2) important inservice competencies, and (3) competencies to be developed when time permits. Section V in this document could be useful to teachers, teacher educators, and administrators of community colleges since it describes the procedures utilized to construct an evaluation instrument for use by administrators in assessing the performance of trade and industrial teachers.

*** Popham, W.J. Identification and Assessment of Minimal Competencies for Objectives-Oriented Teacher Education Programs. Paper presented at Annual Meeting of American Educational Research

Association, New Orleans, LA on February 25-March 1, 1973. 15 pp. ED 076 687. Price: MF-$0.65, HC-$3.29.

Describes an objectives-oriented teacher education program which is based on the assumption that teachers should promote worhtwhile changes in learners. The author recommedns that the follwoing three competencies comprise the core of an objectives-oriented teacher education program: (1) teachers must be able to achieve prespecified instructional objectives with diverse kinds of learners; (2) teachers must be able to both select and generate defensible instructional objectives; and (3) teachers must be able to detect the unanticipated effects of their instruction.

Teaching, performance tests, inventories, simulation and approaches, and student-selected objectives are recommended as methods for assessing the program.

* Prepare Individualized Learning Packages. Charlottetown, Prince Edward Island: Holland College, Professional Development Program, n.d.

These packages contain competency-based instruction for teachers on designing individualized learning packages. Includes rationale, elaborations, learning activities, resources, and evaluation.

A Report on the Region V Conference on Competency-Based Teacher Education. Carbondale, IL: Southern Illinois University, College of Education, 1975. Papers presented at the Region V Conference on Competency-Based Teacher Education, Chicago, IL, March 11-13, 1975. ED 113 501. Price: MF-$0.76, HC-$5.70.

This conference report on competency-based teacher education in Region V is comprised of complete texts of 12 addresses by six conference speakers: "Personnel Development in Occupational Education in Illinois," Sherwood Dees; "One State's (Illinois') Approach to Competency-Based Teacher Education," William Reynolds; "Planning for Personnel Development Within a State (Illinois)," William K. Applegate; "Vocational Educators and Competency-Based Education," Joan R. McFadden; "Preservice Occuptional Program (POP)," Franzie Loepp and Alan Johnson; "Competency-Based Industrial Teacher Education at University of Wisconsin--Stout," Neal Prichard; "Competencies for Professional Education for Professional Education in Home Economics," Phyllis K. Lowe; "Two-Year Inservice Teacher Preparation Program to Provide the Essential Professional Competencies Necessary for Teachers of Agriculture," Wayne E. Asche; "A Competency-Based Program for Preparing Vocational Teachers," Fred S. Cook and Rita C. Richey; "Performance/Competency-Based Teaching Methods, Minnesota Style," Roland L. Peterson; "Administration by Competency (ABC)," Charles Edwards and Wes Habley; and

"A Cautionary Appraisal of CBTE," H.S. Brady.

The purpose of this conference was to share information about ongoing personnel development activities and programs within Region V and to initiate cooperative planning related to vocational personnel development. The conference focused on Competency-Based Teacher Education.

*** Roth, R.A. Evidence on the Effectiveness of Competency-Based Teacher Education Programs. Lansing, MI: Michigan State Department of Education, 1976. 57 pp. ED 121 712.

The purpose of this study was to report evidence concerning the effectiveness of CBTE programs. A number of institutions considered to have operational CBTE programs were identified. Two surveys of teacher education institutions and a comprehensive ERIC search provided the necessary data. Information was obtained from 56 institutions, 65 programs, and 66 reports. This particular paper offers the reader suggestions on how one can examine ways of evaluation teacher education programs and the types of information which can be collected. The researcher in this study classified the program evaluation information received on the effectiveness of CBTE programs under three catagories: (1) pupil growth data, (2) competency attainment, and (3) reactions and feedback on programs. Each category was further divided into subcategories. The survey and literature described in this document reveals a variety of types of studies and information regarding the effectiveness of CBTE programs.

* Roueche, John E. "Can Mastery Learning Be Humane? The Case for Performance-Based Instruction." Community College Review. 3(June 1975). Pp. 14-21.

Makes a case for performance-based instruction. Argues the "humanity" of individualization and a systematic approach in which all students can achieve competency within varied time periods.

* Schalock, H. Del. Competency-Based Vocational Education: Some Subtleties and Complexities. Paper presented at the EPDA Regional Workshop on Competency-Based Vocational Education, Lexington, KY, 1976.

Discusses the following subtleties:

1. The meaning of the word "competence": mastery of knowledge, acquisition of skills, or application of knowledge and skills.
2. The nature of the indicators used as evidence of outcome achievement: verbal reports, printed measures, etc.

3. What level of performance should be required to claim mastery of...knowledge...or skills?
4. Individualization but accompanying depersonalization.

*** Shmieder, A.A. et al. Competency-Based Education: A Briefing Package. Draft. Washington, DC: Division of Educational Systems Development, USOE, 1975. 67 pp. ED 114 364 Price: MF-$0.76, HC-$3.32.

This document contains program descriptions, definitions, recommendations, and other information on competency-based education. It begins with an overview of the CBE Program of the Division of Educational Systems Development, USOE. Following this are descriptions of the National Committee on PBTE, the Multi-State Consortium on PBTE, the CBE Center Consortium, and the Interstate Certification Project. Four state CBE models and nine university CBE centers are described. A definition of CBE is presented along with a list of potential benefits of the competency-based approach, and a discussion of related educational concepts. A list of activities in CBE is then presented, followed by a section containing questions and answers about CBE.

* Schmieder, Alan A. and ERIC Clearinghouse on Teacher Education. Competency-Based Education: The State of the Scene. PBTE Monograph Series: Number 9. Washington, DC: American Association of Colleges for Teacher Education, 1973. ED 073 046.

An overview of the CBE movement: the movement's origins, distinguishing characteristics, and potential. Current resources and important issues are also described. "The State of the States" and a CBE glossary are appended. Focus is on teacher education, but the report is a good historical reference on the CBE movement as a whole.

*** State University of New York. Glossary of Terms Competency-Based Teacher Education. Albany, NY: State University of New York, 1974. 44 pp. ED 091 369. Price: MF-$0.75, HC-$1.85.

Definitions of terms pertaining to competency-based teacher education provide common understanding of this vocabulary. Each term has one or more definitions to illustrate differences and similarities in usage.

* Talmadge, H. Systems of Individualized Education. (Part of Series on Contemporary Educational Issues). Berkeley, CA: National Society for the Study of Education, 1975.

Collection of essays on "individualization of instruction." Includes discussion of Wisconsin R&D Center's IGE, Pittsburgh Learning R&D Center's IPI and related programs, and PLAN from the American Institute for Research-Westinghouse Learning Corporation.

* Turney, Mildred et al. Competency-Based Education--What Is It? Report to the Vice Chancellor by a Task Force appointed by the Faculty Senate, University of Wisconsin-Stout, Menomonie, Wisconsin, 1974. ED 114 361.

Discusses issues and problems within the CBE movement.

University of Maine, School of Education. Competency-Performance-Based Teacher Education for Vocational Teacher Educators. Recommended Modules - A Delphi Study. Gorham, ME: University of Maine, Portland - Gorham, School of Education, 1976. 56 pp. ED 124 546.

The results of a study to identify and prioritize two groups of teacher education modules for vocational education teachers are presented. Included are listings of modules important for a preservice program and a "survival skills" program for tradespersons entering teaching without formal teacher education.

* Wallace, Bertran F. "Modular Design: Another Method of Curriculum Development." American Vocational Journal. 47(May 1972). Pp. 42-44.

Provides ten procedures and a format for developing modules in any vocational subject.

Washington Technical Institute, Washington, DC. Handbook for Writing Learning Objectives. Albany, NY: The University of the State of New York, The State Education Department, Bureau of Secondary Curriculum Development, 1973. 10 pp.

This monograph is designed to show how learning objectives are to be stated and explain the purpose they serve in a course of instruction. Major sections include: introduction, purpose of this monograph, development of a learning objective, examples of learning objectives, improving the clarity of learning objectives, how learning objectives are used and a conclusion. Examples described in this handbook are for vocational personnel. An additional annotated booklist on behavioral objectives is available to the reader.

* Writing Performance Goals--Strategy and Prototypes: A Manual for Vocational and Technical Educators. New York, NY: McGraw-Hill Book Company, Gregg Division, n.d. VT 014 645, ED 061 413.

A two-part manual for preparing performance objectives which also includes prototypes of performance objectives. Discusses characteristics and advantages, a system for writing, general directions (task sequence), general instruction plan, specific instruction plan, and implementation. Prototypes are provided for Agricultural Education, Business and Distributive Education, Health, Home Economics, Technical Education, and T&I.

Publishers Reference

1. American Association of Community and Junior Colleges
One Dupont Circle, N.W.
Washington, DC 20036

2. American Association for Vocational Instructional Materials
Engineering Center
Athens, GA 30602

3. American Institute for Research
P.O. Box 1113
Palo Alto, CA 94302

4. American Vocational Association, Incorporated
1510 H Street
Washington, DC 20005

5. California Coordinating Unit for Occupational Research and Development
Sacramento, CA 95813

6. California State Department of Education
721 Capitol Mall
Sacramento, CA 95813

7. California State University
School of Professional Studies
Department of Industrial Arts and Technology
Fresno, CA 93740

8. Canadian Vocational Association
251 Bank Street
Suite 608
Ottawa, Ontario K2P 1X3

9. Center for Vocational Technical and Adult Education
University of Wisconsin-Stout
Menomomie, WI 54751

10. Central Technical Community College
Hastings, NE 68901

11. Colorado State University
Department of Vocational Education
Fort Collins, CO 80523

12. Cornell Institute for Research and Development in Occupational Education
Department of Education
New York State College of Agriculture and Life Sciences
Ithaca, NY 14850

13. Dade County Public Schools
Office of Vocational and Adult Education
1450 Northeast Second Avenue
Miami, FL 33132

14. Delaware Technical and Community College
Dover, DE 19901

15. East Central Curriculum Management Center
Illinois Office of Education
100 N. First Street E-426
Springfield, IL 62777

16. Education Editor
Wadsworth Publishing Company, Incorporated
10 Davis Drive
Belmont, CA 94002

17. Education Service Center
Region VIII
100 North Riddle Street
Mt. Pleasant, TX 75455

18. Educational Technology Publications, Incorporated
140 Sylvan Avenue
Englewood Cliffs, NJ 07632

19. ERIC Document Reproduction Services
P.O. Box 190
Arlington, VA 22210

20. Fearon Publishers, Incorporated
6 Davis Drive
Belmont, CA 94002

21. Florida Department of Education
Tallahasee, FL 32302

22. Florida State University
Vocational Education Department
Tallahasee, FL 32306

23. Harper and Row Publishers, Incorporated
10 East 53rd Street
New York, NY 10022

24. Holland College
College Campus
Weymouth Street
Charlottetown, Prince Edward Island, Canada C1A 4Z1

25. Houghton Mifflin Company
Regional Sales Offices:

*Pennington-Hopewell Road
Hopewell, NJ 08525

*777 California Avenue
Palo Alto, CA 94304

*666 Miami Circle, N.E.
Atlanta, GA 30324

*6626 Oakbrook Boulevard
Dallas, TX 75235

*1900 South Batavia Avenue
Geneva, IL 60134

26. Instructional Materials Laboratory
The Ohio State University
1885 Neil Avenue, Room 112
Columbus, OH 43210

27. Larimer County Vocational Technical Center
Fort Collins, CO 80521

28. Link Educational Laboratories
Montgomery, AL 36104

29. McCutchan Publishing Corporation
2526 Grove Street
Berkeley, CA 94704

30. McGraw-Hill Book Company
1221 Avenue of the Americas
New York, NY 10020

31. McKnight and McKnight
P.O. Box 2854
Bloomington, IL 61701

32. Mid-America Vocational Curriculum Consortium, Incorporated
1515 West Sixth Avenue
Stillwater, OK 74074

33. Minnesota Instructional Materials Center
3300 Century Boulevard
Intermediate School District 916
White Bear Lake, MN 55110

34. National Advisory Council on Education Professions Development
1111 20th Street, N.W.
Suite 308
Washington, DC 20036

35. National Center for Research in Vocational Education
1960 Kenny Road
Columbus, OH 43210

36. National Education Association
NEA Order Department
The Academic Building
Saw Mill Road
West Haven, CT 06516

37. National Technical Information Service
Springfield, VA 22151

38. New Jersey Vocational Technical Curriculum Laboratory
Rutgers University
New Brunswick, NJ 08903

39. New York State Education Department
The Office of Occupational Education
State University of New York at Albany
Albany, NY 12207

40. Northern Illinois University
Department of Educational Administration and Services
DeKalb, IL 60115

41. Northwest Regional Educational Laboratory
710 S.W. Second Avenue
Portland, OR 97204

42. Ohio Agricultural Education Curriculum Materials Service
The Ohio State University
2120 Fyffe Road, Room 254
Columbus, OH 43210

43. Oklahoma State Department of Vocational and Technical Education
1515 West Sixth Avenue
Stillwater, OK 74074

44. Order Department
American Association of Colleges for Teacher Education
One Dupont Circle
Suite 610
Washington, DC 20036

45. Pennsylvania State Department of Education
Bureau of Vocational Education
Harrisburg, PA 17126

46. Research and Curriculum Unit for Vocational Technical Education
College of Education
Drawer DX
Mississippi State, MS 39762

47. State of Alabama
State Department of Education
Division of Vocational Education and Community Colleges
Montgomery, AL 36130

48. State Board of Vocational and Technical Education
401 Illinois Building
17 West Market Street
Indianapolis, IN 46204

49. Suburban Hennepin County Area Vocational Technical Centers
Minneapolis, MN 55401

50. Teacher Center
University of Houston
466 Farish Hall
Houston, TX 77004

51. Temple University
College of Education
Department of Vocational Education
Philadelphia, PA 19122

52. Texas Education Agency
Division of Occupational Research and Development
201 East Eleventh Street
Austin, TX 78701

53. The Center for Research and Instructional Materials
College Park, MD 20740

54. University of Illinois
Department of Vocational and Technical Education
College of Education
Urbana, IL 61801

55. University Research Corporation
5530 Wisconsin Avenue, N.W.
Washington, DC 20015

56. U.S. Department of Labor
Manpower Administration
Office of Research and
Development
601 D Street, N.W.
Washington, DC 20213

57. U.S. Government Printing Office
Division of Public Documents
Washington, DC 20402

58. Virginia Polytechnic Institute
and State University
Division of Vocational and
Technical Education
Blacksburg, VA 24061

59. Vocational Curriculum
Laboratory
Cedar Lakes Conference Center
Ripley, WV 25271

60. Vocational Curriculum
Materials Service
1410 N.E. Second Avenue
Room 710
Miami, FL 33132

61. Wayne State University
College of Education
Department of Vocational and
Applied Arts
Detroit, MI 48202

APPENDIX C

Master List of Categories and Performance Elements

and

Competency Areas Identified as Relevant to Post-Secondary Instructors Through DACUM Workshop

MASTER LIST OF CATEGORIES AND PERFORMANCE ELEMENTS*

I. Program Planning, Development, and Evaluation

1. Organize a steering committee to assist in the pre-planning activities of a community survey.
2. Identify the geographical area in which a community survey will be conducted.
3. Obtain administrative approval for conducting a community survey.
4. Solicit assistance of the vocational education personnel from the state department and/or university in conducting a community survey.
5. Adapt existing community survey materials to local needs.
6. Consult the chamber of commerce to identify area employers to be contacted in a community survey.
7. Consult the local office of the U.S. Employment Service to obtain information on manpower trends and needs.
8. Persuade labor representatives to participate in a community survey.
9. Involve the steering committee in conducting a community survey.
10. Recruit teachers and guidance personnel to participate in conducting a community survey.
11. Establish communication with employer representatives who will be involved in a community survey.
12. Devise a plan of activities for the survey staff to follow in conducting a community survey.
13. Publicize the purposes and objectives of a community survey.
14. Orient the survey staff to their duties and responsibilities in collecting occupational data.
15. Direct students in the collection of data for a community survey.
16. Collect occupational data from employers to identify vocational education needs.
17. Collect student occupational interest data to identify vocational education needs.
18. Recommend a vocational education program based on the findings of a community survey.
19. Disseminate the findings of a community survey.
20. Identify the role and function of the advisory committee.
21. Establish the criteria for selection of the advisory committee members.
22. Obtain school board authorization for organizing the advisory committee.
23. Obtain administrative approval of the selected advisory committee members.

---

*Taken from Model Curricula for Vocational and Technical Teacher Education: Report No. V, General Objectives, Set II. Research and Development Series No. 78 by Calvin J. Cotrell; Shirley A. Chase; and Marilyn J. Molnar. Columbus, Ohio: The Ohio State University, The Center for Vocational Education, 1972.

24. Publicize to the school and community the establishment of the advisory committee, its members, and its function.

25. Orient the advisory committee members to their role and function.

26. Plan the annual agenda to be considered by the advisory committee.

27. Communicate the date, place, and agenda for the advisory committee meetings to all persons concerned.

28. Invite resource persons who can provide consultation service to attend the advisory committee meetings.

29. Serve as the liaison for the advisory committee and the school administration.

30. Assist in the identification of the school's vocational education purposes and goals.

31. Determine the occupations for which training is to be offered in the vocational education program.

32. Consult the advisory committee in planning an analysis of an occupation.

33. Analyze occupations with the assistance of employers and labor representatives.

34. Identify the competencies needed for entry into an occupation.

35. Describe the occupational standards of performance for each task in an occupation.

36. Assist in writing general objectives for the vocational education program offerings.

37. Develop vocational education offerings by clustering and sequencing related tasks.

38. Identify the knowledge and attitudes required for the performance of each task included in a vocational education offering.

39. Write student performance objectives for the vocational education offering.

40. Consult the advisory committee in developing a long-range program plan for vocational education.

41. Analyze long-range needs for the offerings of the vocational education program.

42. Specify the long-range facility, equipment, and supply needs for the vocational education program.

43. Assist in the preparation of a long-range budget for the vocational education program.

44. Identify the long-range needs for employing faculty for the vocational education program.

45. Assist in preparing the long-range program plan for vocational education.

46. Analyze continual follow-up information on the placement, employment, and training status of each graduate of the vocational education program.

47. Obtain follow-up data from employers of graduates of the vocational education program.

48. Determine the reasons students leave the vocational education program.

49. Review supervisory evaluation reports for assessing the vocational education program.

50. Assess the relevancy of the vocational education offerings.

51. Disseminate a summary of the vocational education program evaluation to administrators, advisory committee members, and members of the board of education.

II. Planning of Instruction

52. Review general objectives for the vocational education offerings.

53. Review student performance objectives developed for the vocational education offerings.

54. Sequence student performance objectives for an offering in the vocational education program.

55. Determine student needs and interests.

56. Involve the students in planning a unit.

57. Select student performance objectives for a unit.

58. Write content outline for a unit.

59. Correlate unit content with on-the-job and/or laboratory experiences.

60. Determine for a unit group and individual learning experiences based on individual differences of students.

61. Select methods of evaluating student performance throughout a unit.

62. Identify the student performance objectives for a lesson.

63. Select teaching techniques for a lesson.

64. Plan the introduction of a lesson.

65. Plan the content of a lesson.

66. Plan the summary of a lesson.

67. Plan student learning experiences for a lesson.

68. Select methods of evaluating students' attainment of specific student performance objectives.

69. Write a lesson plan.

70. Obtain textbook, reference, and other instructional materials.

71. Select tools and/or equipment for a lesson.

72. Assemble consumable supplies for instructional purposes.

73. Develop original instructional materials such as individualized related assignment sheets, transparencies, and charts.

74. Involve students in the preparation of instructional materials.

75. Obtain programmed instructional materials.

76. Prepare instructional materials with a spirit duplicator.

77. Prepare instructional materials with a stencil duplicator.

78. Prepare instructional materials (hard copy and transparency) with a photocopier.

III. Execution of Instruction

79. Conduct field trips.

80. Direct students in gathering information from sources in the community.

81. Conduct symposiums.

82. Conduct brainstorming sessions.

83. Direct student presentations.

84. Direct students in instructing other students.

85. Direct simulation techniques.

86. Conduct group supervised study.

87. Direct student laboratory experience.

88. Direct students in applying problem-solving techniques.

89. Present information through case study problems.

90. Present information by the project method.

91. Direct student study of textbooks, bulletins, and pamphlets.

92. Direct student study of information and assignment sheets.

93. Direct students in preparing laboratory work or job plans.

94. Guide student progress through the use of operation and/or job sheets.

95. Lead group discussions.

96. Conduct panel discussions.

97. Conduct buzz groups.

98. Employ the question box technique.

99. Employ role-playing techniques.

100. Introduce a lesson.

101. Obtain summary for a lesson.

102. Employ oral questioning techniques.

103. Acknowledge student verbal and nonverbal cues.

104. Enrich instruction to challenge the abilities of the more capable student.

105. Reinforce learning.

106. Provide remedial work for slow learners.

107. Employ reward techniques.

108. Establish frames of reference to enable the students to understand a situation from several points of view.

109. Apply nonverbal techniques.

110. Demonstrate a manipulative skill.

111. Present a concept or principle through a demonstration.

112. Give a lecture.

113. Give an illustrated talk.

114. Present information with analogies.

115. Present information by use of individualized instruction.

116. Present information through team teaching.

117. Give an assignment.

118. Present information with the assistance of a resource person.

119. Present information with bulletin boards.

120. Present information with exhibits.

121. Illustrate with models and real objects.

122. Present information with an overhead projector.

123. Present information with an opaque projector.

124. Present information with filmstrips.

125. Present information with slides.

126. Present information with sound motion pictures.

127. Present information with single concept films.

128. Present information with an audio recorder.

129. Present information with a video recorder or closed circuit television.

130. Present information with a tele-lecture.

131. Present information with a record player.

132. Present information with educational television.

133. Direct teaching-machine programmed instruction.

134. Present information by computer-assisted instruction.

135. Direct written programmed instruction.

136. Present information with the aid of a flannel board.

137. Present information with the aid of a flip chart.

138. Present information with the aid of a chalkboard.

IV. Evaluation of Instruction

139. Establish criteria for student performance.

140. Formulate a system of grading consistent with school policy.

141. Appraise students' products according to occupational performance standards.

142. Appraise students' performance in relation to student performance objectives.

143. Evaluate individualized assignments completed under directed study.

144. Devise self-evaluation techniques for use by students.

145. Arrange for students to evaluate their own progress.

146. Engage in cooperative evaluation of achievement with students.

147. Determine students' grades based on related instruction and laboratory or on-the-job experience.

148. Interpret students' evaluation of instruction.

149. Formulate essay test items.

150. Formulate true-false test items.

151. Formulate completion test items.

152. Formulate matching test items.

153. Formulate multiple-choice test items.

154. Devise laboratory performance tests.

155. Devise laboratory performance rating sheets.

156. Formulate test items for an oral test.

157. Administer teacher-made tests.

158. Devise case study problems.

159. Analyze tests for validity.

160. Analyze tests for reliability.

161. Review student progress and/or achievement records to assess effectiveness of instruction.

162. Involve students in formulating the procedures for their participation in the evaluation of instruction.

163. Obtain information from fellow teachers and supervisory personnel regarding the quality of one's instruction.

164. Seek opportunities for self-evaluation of instruction.

V. Management

165. Compile a list of supplies needed for the academic year.

166. Identify new tools and/or equipment needed for the academic year.

167. Recommend reference books and periodicals related to vocational education that should be added to the library.

168. Prepare a capital outlay budget proposal for new equipment.

169. Plan an operating budget proposal for consumable supplies, services, and instructional materials.

170. Prepare a budget for estimating travel expenses incurred in vocational activities.

171. Arrange for additional vocational facilities to accommodate expanded enrollments and technological advancements.

172. Prepare purchase requests for approved vocational equipment and supplies.

173. Design a procedure for acquiring needed consumable supplies and materials.

174. Accept gifts or donations of supplies and equipment for the vocational education program in accordance with school policy.

175. Devise a system for determining and collecting student fees for consumable supplies.

176. Structure a filing system for records and report forms.

177. Supply the data for vocational reports required by the state department of education.

178. Devise a filing system for instructional materials.

179. Devise a system for maintaining occupational opportunity information for use by vocational students.

180. Record vocational student attendance according to school policy.

181. Record vocational students' grades according to school policy.

182. Assemble individual student files documenting personal characteristics, attitudes, and grades.

183. Provide approved safety apparel and devices for vocational students assigned to hazardous equipment.

184. Establish a procedure for attending to the first aid needs of vocational students.

185. Maintain a record of safety instruction presented in compliance with safety laws and regulations.

186. Uphold school standards of expected student behavior.

187. Formulate with students acceptable standards of behavior in vocational classrooms and laboratories.

188. Uphold acceptable standards of student behavior in vocational classrooms and laboratories.

189. Carry out approved disciplinary action when warranted.

190. Encourage students to exercise self-discipline.

191. Control outbursts of fighting and aggressive behavior.

192. Maintain an inventory of vocational tools, supplies, and equipment.

193. Establish a system for repairing and servicing tools and equipment in the laboratory.

194. Arrange for the storage and security of supplies and equipment.

195. Implement student check-out procedures for tools, supplies, and equipment used in the laboratory.

196. Direct students in a system for cleaning and maintaining the laboratory.

197. Schedule laboratory equipment for maximum utilization by students.

198. Arrange layout of the vocational laboratory to simulate the occupational environment.

199. Arrange laboratory work areas and storage space to facilitate student work performance.

200. Control heat, light, and ventilation in vocational laboratories and classrooms.

201. Establish a policy for use of the physical facilities and equipment by other school personnel and outside groups.

VI. Guidance

202. Determine students' background and environment.

203. Administer subject-matter diagnostic tests.

204. Analyze students' cumulative records.

205. Maintain anecdotal records.

206. Determine relationships among students through the sociogram or other sociometric techniques.

207. Review students' autobiographies for information to aid in understanding the students.

208. Assemble information for case study reports.

209. Communicate with prospective and continuing students during the summer.

210. Maintain an open door policy for student consultation.

211. Encourage students to discuss career aspirations.

212. Demonstrate a regard for and an interest in students as individuals.

213. Develop constructive working relationships among students.

214. Demonstrate personal concern for the student and his family.

215. Conduct home visits.

216. Recognize potential problems of students.

217. Conduct a conference with a student.

218. Conduct group conferences.

219. Confer with the student and his parents regarding his educational development.

220. Interpret occupational tests and inventories to students.

221. Assist students in developing good study habits.

222. Establish communication patterns for exchanging information and for cooperating with the guidance staff.

223. Supply guidance staff with performance data about students.

224. Refer students to guidance staff and other specialists.

225. Assist students with their problems by working cooperatively with outside agencies such as health and welfare services.

226. Work with other teachers to help students with individual concerns.

227. Refer students to qualified resource persons for occupational and educational information.

228. Arrange with professional staff for administration and interpretation of personality, aptitude, and intelligence tests for specific students.

229. Arrange for the local office of the U.S. Employment Service to administer and interpret the General Aptitude Test Battery.

230. Present information to students on occupational opportunities.

231. Present information to students on advanced training and education at opportunities available to them.

232. Assist students in determining ways to best describe their salable skills.

233. Write letters of recommendation for students.

234. Assist graduating students in preparing for interviews with potential employers.

235. Assist students in securing and completing applications for jobs, scholarships, educational loans, or college admission.

VII. School-Community Relations

236. Assist in the development of policies regarding school-community relations.

237. Plan the school-community relations activities for the vocational education program.

238. Procure clearance from the school administration to conduct school-community relations activities related to the vocational education program.

239. Express a philosophy consistent with that of the vocational faculty.

240. Speak to school and community groups about the vocational education program.

241. Provide brochures to inform the school and community about the vocation program.

242. Provide displays in the school and community about the vocational education program.

243. Prepare news releases and manuscripts on activities of the vocational education program for newspapers and other periodicals.

244. Present activities of the vocational education program on television.

245. Present activities of the vocational education program on radio.

246. Direct student presentations describing activities of the vocational education program.

247. Conduct an open house to familiarize members of the school and community with activities of the vocational education program.

248. Sponsor student-parent activities for the vocational education program.

249. Assist with special community social events.

250. Assist with community business and industry sponsored activities.

251. Serve in professional nonvocational organizations to improve the image of the vocational education program.

252. Serve in a community civic, service, or social organization to improve the image of the vocational education program.

253. Provide consultant services to local business and industry.

254. Maintain liaison with union officials and employers.

255. Maintain liaison with employment agencies.

256. Maintain liaison with community professional, service, fraternal, social, and religious organizations.

257. Maintain good relations with other schools.

258. Maintain liaison with state department personnel.

259. Obtain informal feedback on the vocational education program through contacts with individuals in the school and community.

260. Conduct opinion surveys in the school and community concerning the vocational education program.

261. Analyze enrollment trends to determine student and parent acceptance of the vocational education program.

262. Obtain information from parents relative to their expectations of the vocational education program.

263. Consult the advisory committee to obtain information concerning their expectations of the vocational education program.

264. Acquire information from members of the community power structure (e.g., political, social, and economic pressure groups) regarding their expectations of the vocational education program.

265. Study community voting results on financial issues affecting the vocational education program to determine community support.

266. Study in-school election results (student council, class officers) to determine the image of the vocational students in the school.

267. Maintain working relationships with the school administration and faculty.

268. Assist in planning the goals of the total school program.

269. Maintain working relationships with the school supporting staff through cooperation and mutual effort.

VIII. Student Vocational Organization

270. Obtain approval from the school administration for establishing the student vocational organization.

271. Contact state department personnel regarding the steps to be followed in organizing a student vocational organization.

272. Acquaint prospective members and their parents with the purposes, activities, and values of the student vocational organization.

273. Organize a student committee to assess student interest in joining a student vocational organization.

274. Assist in the development of a constitution and bylaws for the student vocational organization.

275. Conduct an organizational meeting for a student vocational organization.

276. Direct initiation activities of the student vocational organization.

277. Orient students to the student vocational organization.

278. Assist in the election and installation of officers of the student vocational organization.

279. Conduct a leadership training session for the officers of the student vocational organization.

280. Obtain the assistance of state department personnel in maintenance of the student vocational organization.

281. Assist students in developing a yearly program of work for the student vocational organization.

282. Assist students in advancing within the available degrees in the student vocational organization.

283. Supervise social and educational activities for the student vocational organization.

284. Involve elected chapter parents in the activities of the student vocational organization.

285. Assist students with publicizing the student vocational organizational activities.

286. Assist students with the financial management of the student vocational organization.

287. Assist in planning and organizing fund-raising activities for the student vocational organization.

288. Maintain a file of publications available for the student vocational organization.

289. Supervise the development of an annual handbook for the student vocational organization.

290. Supervise the development of a chapter scrapbook for the student vocational organization.

291. Evaluate the student vocational organization.

292. Affiliate the student vocational organization with the state and national vocational organizations.

293. Assist in the preparation of state and national reports for the student vocational orgsnization.

294. Provide advice for student entries in state and national student vocational organization contests.

295. Send student representatives to district, state, regional, and national student vocational organization activities.

296. Assist in the development of rules and procedures for conducting district, state, regional, and national student vocational organization contests.

297. Serve as an advisor or judge for district, state, regional, or national student vocational organization contests.

298. Participate in district, state, regional, and national activities of the student vocational organization.

IX. Professional Role and Development

299. Identify current trends of the teaching profession.

300. Promote the attainment of the goals of the teaching profession.

301. Express a personal professional philosophy consistent with the goals of the teaching profession.

302. Express a personal professional philosophy consistent with the goals of vocational education.

303. Maintain the ethical standards expected of a professional educator.

304. Exchange observational visits, innovations, and ideas with others in the profession.

305. Support professional organizations through membership and attendance at meetings.

306. Serve professional organizations as an officer and/or chairman or member of a committee.

307. Represent the teaching profession as a committee member, delegate, or program participant at meetings and activities of other related professions.

308. Participate in experimental and other data collecting research activities.

309. Write an article or book for publication which contributes to the literature of the profession.

310. Assist in orienting teachers who are new to the school system.

311. Work with a team from the school and/or community on pertinent school activities.

312. Serve community needs by contributing professional expertise to community activities.

313. Consult supervisory and administrative evaluations to determine attitudes of others toward one's personal and professional abilities and limitations.

314. Use a self-analysis form to evaluate personal and professional abilities and limitations.

315. Select the teaching position which is in keeping with personal and professional abilities and limitations.

316. Maintain professional certification through enrolling in graduate, extension, and in-service education programs.

317. Expand educational background and leadership potential by achieving advanced degrees.

318. Keep up-to-date through reading professional literature.

319. Acquire new occupational skills and information needed to keep pace with technological advancement in vocational education.

320. Update professional personnel file regularly.

321. Participate in noninstructional school activities (cafeteria supervision, homeroom, bus duty, chaperoning, etc.).

322. Assist with nonvocational student organization activities.

323. Provide opportunities for potential teachers to observe and participate in the public school program.

324. Interpret the policies and regulations of the local school district to the student teacher.

325. Plan activities for the student teacher which draw upon and enrich college course work.

326. Assign responsibilities commensurate with the student teacher's background of knowledge and experience.

327. Demonstrate instructional techniques for student teachers.

328. Consult regularly with the student teacher regarding planning, implementing, and evaluating teaching.

329. Confer regularly with the student teacher.

330. Confer with the college supervisor and the student teacher regarding plans for and evaluation of the total student teaching experience.

X. Coordination

331. Establish criteria for selection of student-learners.

332. Provide prospective student-learners with resource materials on occupational opportunities to aid them in selecting a vocation.

333. Administer occupational tests relative to student-learner selection and placement.

334. Gather student-learner selection data.

335. Interview students and parents to obtain student-learner interest and aptitude information.

336. Identify a prospective student-learner on the basis of selection criteria and data.

337. Match a student-learner's unique characteristics with an appropriate training station.

338. Negotiate on-the-job training hours and wages for student-learners.

339. Establish criteria for evaluating the training station potential of a business or industry.

340. Identify prospective cooperating employers to provide on-the-job training stations.

341. Establish criteria to evaluate qualifications of prospective on-the-job instructors.

342. Assess training capability of the on-the-job instructor of the prospective training station.

343. Assess educational adequacy of the prospective training station's facilities and equipment.

344. Assess safety provisions of the facilities and equipment of the prospective training station.

345. Convince an employer to provide a training station for cooperative vocational education.

346. Arrange with a union to make contract provisions for student-learners.

347. Develop a training agreement between student-learner, parent, school, and cooperating employer.

348. Arrange school and work schedules with student-learners and school and employing personnel.

349. Develop a systematic training plan with the cooperating employer and/or the on-the-job instructor.

350. Aid student-learners in procuring work permits.

351. Assist the cooperating employer in obtaining information concerning federal and state wage and hour classifications.

352. Assist the cooperating employer in acquiring a federal permit to pay a training wage.

353. Assist the cooperating employer in verifying the legality of employing a student-learner in a hazardous occupation.

354. Establish the cooperating employer's qualifications for reimbursement for training a student-learner.

355. Obtain reimbursement for the cooperating employer providing on-the-job training.

356. Obtain reimbursement for the student-learner for allowable training costs such as clothing and tools.

357. Prepare the student-learner for an interview with the cooperating employer and training station personnel.

358. Assist the student-learner in on-the-job training orientation.

359. Assist the cooperating employer's personnel in accepting the training status and role of the student-learner.

360. Maintain good working relationships with training station personnel.

361. Develop a procedure to insure student's safety and protection in the training station.

362. Develop a plan for supervision of on-the-job training.

363. Inform the administration of the coordination itinerary.

364. Assess the on-the-job experience daily reports with the student-learner to plan future instruction.

365. Encourage the on-the-job instructor to follow the training plan in providing experiences for the student-learner.

366. Maintain the student-learner's progress reports for on-the-job training and related instruction.

367. Examine the student-learner's progress reports to determine future on-the-job training experiences and related instruction.

368. Maintain a record of individual work hours, wages, and work experiences of on-the-job training.

369. Assist the student-learner in the solution of problems related to on-the-job training.

370. Control student-learner absenteeism from school and on-the-job training.

371. Control the transfer of student-learners within the cooperative vocational education program and to other school programs.

372. Conduct termination procedures for on-the-job training for the student-learner when conditions demand it.

373. Sponsor an employer-employee appreciation event.

374. Evaluate the student-learner's work qualities and habits on the job.

375. Evaluate the student-learner's personal traits and characteristics on the job.

376. Check the student-learner's progress in acquiring skills on the job.

377. Check the student-learner's progress with the on-the-job instructor and other training station personnel.

378. Assess the student-learner's performance with the assistance of the on-the-job instructor.

379. Obtain suggestions from the on-the-job instructor to guide the selection of lessons for related instruction.

380. Evaluate the quality of the on-the-job training received by the student-learner.

381. Provide a workshop to assist on-the-job instructors in techniques for teaching student-learners.

382. Assist the on-the-job instructor with development of teaching techniques during supervisory visits to the training station.

383. Update related instruction for student-learners on the basis of information on technology obtained from cooperating employers.

384. Obtain information from the advisory committee on ways to improve related instruction and on-the-job training.

COMPETENCY AREAS IDENTIFIED AS RELEVANT TO POST-SECONDARY INSTRUCTORS THROUGH DACUM WORKSHOP

A modified DACUM workshop was conducted on September 15-16, 1977 with members of the Advisory/Planning Committee for the Post-Secondary Personnel Development Project serving as DACUM committee members. Forty-seven (47) different competency "areas" were identified as relevant to the priority training needs of post-secondary occupational instructors. It should be noted that project time and financial constraints precluded any type of competency verification being conducted. With this limitation in mind, the following "areas" of competency are presented for the consideration of persons concerned with planning CBSD programs.

Competency Areas

1. Eliminate set sex bias and stereotyping.
2. Develop expertise in competency-based methodology.
3. Develop empathy for students with cultural and language difference.
4. Manage and coordinate multi-level educational activities.
5. Manage classroom and laboratory learning activities.
6. Develop skill in the basic techniques of instruction.
7. Make effective use of industry/business community resources.
8. Evaluate student performance.
9. Demonstrate knowledge of the mission of post-secondary occupational education.
10. Organize and utilize occupational advisory committees.
11. Use effective approaches to planning and needs assessment.
12. Conduct task analysis for curriculum development.
13. Conduct placement and follow-up of students.
14. Assess program effectiveness.
15. Assist with student counseling, admissions, and advising.

16. Determine student needs.

17. Develop a personal plan for technical and professional development.

18. Develop individualized learning packages.

19. Demonstrate an appreciation and belief in human worth and and dignity.

20. Evaluate students' prior experiences for credit.

21. Evaluate program outcomes.

22. Develop cooperative education programs.

23. Make effective use of group process skills.

24. Demonstrate knowledge of school management policies and procedures.

25. Show empathy for employer concerns.

26. Demonstrate an awareness of political and governmental affairs.

27. Develop interpersonal skills.

28. Create positive work attitudes and habits in students.

29. Participate in student organizations.

30. Use curriculum theory and development procedures.

31. Develop an awareness of developing technocracies.

32. Use DACUM techniques for identifying program competencies.

33. Interpret and use student demographic data.

34. Interpret and use labor market supply and demand data.

35. Make effective use of learning theories.

36. Analyze demographic data for instructional implications.

37. Develop positive attitudes toward work.

38. Interpret and use labor market needs data.

39. Use techniques for understanding and eliciting student values, beliefs, and goals.

40. Demonstrate knowledge of the relationship of the individual to the larger organization.

41. Develop mechanisms to improve collegiality and cooperation.

42. Develop appropriate interdisciplinary relationships.

43. Make appropriate use of evaluation techniques and outcomes.

44. Assist in program planning and development activities.

45. Participate in planning and conducting experimental programs.

46. Use industry data for program planning and evaluation purposes.

47. Acquire and evaluate instructional materials.

APPENDIX D

Selected Bibliography

SELECTED BIBLIOGRAPHY

Adams, Kay Angona, and Jerry P. Walker: Improving the Accountability of Career Education. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1977.

Adams, Robert E. DACUM Approach to Curriculum and Evaluation in Occupational Training. Yarmouth, Nova Scotia: Nova Scotia New Start, Inc., 1971.

American Association of Colleges for Teacher Education. Achieving the Potential of Performance-Based Teacher Education: Recommendations. PBTE Monograph Series: No. 16. Washington, DC: AACTE, 1974.

Arizona State Collegial Team. "Arizona Administrator Renewal/ Administrator Needs Assessment." Phoenix, AZ: Arizona Department of Education, Arizona State Collegial Team, n.d.

California State Department of Education. The Evaluation Improvement Program. Program Evaluator's Guide. Princeton, NJ: Educational Testing Service, 1977.

The Center for Vocational Education, The Ohio State University. "Develop Student Performance Objectives." The Professional Teacher Education Module Series. Athens, GA: American Association for Vocational Instructional Materials (AAVIM), 1977.

Chabotar, Kent J., and Lad, Lawrence J. Evaluation Guidelines for Training Programs. Lansing, MI: Department of Civil Service, Intergovernmental Personnel Program, 1974.

Cotrell, Calvin J. et al. Model Curricula for Vocational and Technical Teacher Education: Report No. V - General Objectives, Set II. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1972.

Doty, Charles R. and Ronald Gepner, (Eds.) Post-Secondary Personnel Development. Volume 1. Trenton, NJ: Mercer County Community College, 1976.

Fardig, Glen E., Robert E. Norton, and James B. Hamilton. Guide to the Implementation of Performance-Based Teacher Education. Athens, GA: American Association for Vocational Instructional Materials (AAVIM), 1977.

Gaff, Jerry G. Toward Faculty Renewal. San Francisco: Jossey-Bass, 1975. Cited by Eric Beamish, et al. in An Assessment of Needs for Professional Personnel for Occupational Education in New York State: Postsecondary, p. 258. Ithaca: Institute for Research and Development in Occupational Education, Cornell University, 1977.

Geigle, Erwin K. et al. "Professional Needs Assessment," and "Evaluation of Instruction" instruments; "Background Information" form. Minneapolis, MN: University of Minnesota, Minnesota Research and Development Center for Vocational Education, 1977.

Hammons, James O. "Faculty Development in the Community College." In Post-Secondary Personnel Development, Volume I, pp. 158-193. Edited by Charles R. Doty and Ronald Gepner. Proceedings of the National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less Than Baccalaureate Degree. January 18-21, 1976. St. Louis, MO.

Hammons, James O. "Suggestions Concerning Institutional Training of New Faculty." Community College Review. (July/August 1973): 49-60.

Hammons, James O. and Terry H. Smith Wallace. An Assessment of Community College Staff Development Needs in the Northeastern United States. University Park, PA: The Pennsylvania State University, Center for the Study of Higher Education, 1976.

Lombardi, John, comp. Staff Development Programs for Part-Time Occupational-Vocational Instructors: An ERIC Brief. Los Angeles, CA: ERIC Clearinghouse for Junior Colleges, California University, 1975. ED 116 732.

Nordh, D. M. "Accountability and the Community College." Junior College Journal, Volume 41 (March, 1971). Cited by Terry O'Banion in Teachers for Tomorrow, p. 69. Tuscon, AZ: The University of Arizona Press, n.d.

Norton, Robert E. Staff Development Guidelines and Procedures for Comprehensive Career Education. Columbus, OH: The Center for Vocational Education, The Ohio State University, August, 1975.

Norton, Robert E. et al. Appraise the Personnel Development Needs of Vocational Teachers. Columbus, OH: The Center for Vocational Education, The Ohio State University, 1977.

Norton, Robert E. and May W. Huang. Student Guide to Using Performance-Based Teacher Education Materials. Columbus, OH: The Center for Vocational Education, The Ohio State University, August, 1975.

O'Banion, Terry. "Staff Development: A Priority on Persons." In New Staff for New Students, pp. 23-40. Edited by Roger Yarrington. Washington DC: American Association of Community and Junior Colleges, 1974.

Professional Development Handbook for Community College Part-Time Faculty Members. Springfield, IL: Office of Continuing Education and Public Service; Champaign, IL: University of Illinois at Urbana-Champaign, College of Education, Department of Vocational and Technical Education, 1977.

Rubin, Louis J. Innovation in In-Service Education and Training of Teachers - United States. Provisional Report. University of Illinois, Urbana-Champaign, for the Centre for Educational Research and Innovation (CERI).

Schaefer, Michael I. "The Forgotten Faculty--Staff Development for Part-Time Occupational Instructors in Post-Secondary Education." In Post-Secondary Personnel Development, Volume I, pp. 194-208. Edited by Charles R. Doty and Ronald Gepner. Proceedings of The National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less Than Baccalaureate Degree. January 18-21, 1976. St. Louis, MO.

Scott-Blair, D. Michael. "Customized model revs up inservice training." Nation's Schools. 93 (May 1974): 33-35.

Smith, Richard R. "Toward Maximum Effectiveness: Staff Development Programs for Post-Secondary Vocational-Technical Personnel." In Post-Secondary Personnel Development, Volume I, pp. 129-143. Edited by Charles R. Doty and Ronald Gepner. Proceedings of The National Conference on Personnel Development for Post-Secondary Vocational and Technical Education Programs of Less Than Baccalaureate Degree. January 18-21, 1976. St. Louis, MO.

Strong, Merle E., and Schaefer, Carl J. Introduction to Trade, Industrial, and Technical Education. Columbus, OH: Charles E. Merrill, 1975.

Stufflebeam, Daniel. Cited in Educational Evaluation and Decision-Making. PDK National Study Committee on Education. Itasca, IL: F.E. Peacock Publishers, Inc., 1971.

Van Ast, John, Jr. A Rationale For, And the Development of a Local Plan of Action for Vocational Education Personnel Development - VEPD. Paper presented at the Personnel Development Workshop, Ames, Iowa, February 24-25, 1977.

Van Ast, John, Jr. "Personnel Development Systems for Iowa's Community Colleges." Paper presented at the 1977 Mississippi Valley Industrial Teacher Education Conference, Chicago, November, 1977.

Wallace, Terry H. "The Literature on Staff Development: Emphases and Shortcomings." In Proceedings: The Conference on Questions and Issues in Planning Community College Staff Development Programs. Edited by James O. Hammons. Center for the Study of Higher Education, The Pennsylvania State University, University Park, PA, June 1975. ED 116 732.